ENVIRONMENTAL ASSESSMENT
FOR CONSTRUCTION OF NEW VISITOR FACILITIES
IN THE ENTRANCE AREA OF DENALI NATIONAL PARK

Prepared by
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DENALI NATIONAL PARK AND PRESERVE

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TABLE OF CONTENTS

FIGURES

TABLES

I. PURPOSE AND NEED

The National Park Service (NPS) is proposing to refine facility site locations and facility use in the entrance area of Denali National Park and Preserve (Denali) for development authorized by the 1997 Record of Decision for the *Entrance Area and Road Corridor Development Concept Plan* (DCP/EIS). This plan would be an amendment to the 1986 General Management Plan (GMP) and to the *Denali National Park and Preserve Entrance Area and Road Corridor Development Concept Plan* (DCP/EIS) and proposes that the new visitor center and related visitor service buildings be located on the former park hotel site. The plan would establish a strong visual and pedestrian link between the improved railroad depot and the new visitor center complex. A Denali Science and Learning Center would also have an expanded role in a new campus location north of the hotel site. All of these facilities would offer more in-depth opportunities for education, interpretation and research for the visitors' first contact with the park. Furthermore, the park road would be routed around the visitor center and railroad depot thereby increasing pedestrian safety and ease of access to the center from the depot. Additional developments would improve the concession employee living area.

The decision on the DCP/EIS designated the area between the park entrance and former park hotel for increased development which would provide a variety of expanded opportunities for visitors in the entrance area and along the road corridor of the park over the next 15-20 years. The developments are limited to actions in which the NPS has traditionally specialized, such as interpretive centers, environmental education opportunities, trails, resource protection programs, and campgrounds. This concept was widely supported during public review of the DCP/EIS.

The DCP/EIS contained general direction for development in the entrance area and along the road corridor. Specific building locations and building designs were to be determined during implementation of the plan. Some of the approved developments have been constructed as specified in the plan. Other elements of the plan were subject to further review to determine whether improvements could be made to more fully meet the goals of the original development concept plan. During this review, additional opportunities were identified to facilitate visitor use of major facilities, such as the new visitor center, and for improving the efficiency of traffic flow. Specifically, the former hotel site was identified as the best location to provide services to visitors arriving and departing from the nearby railroad depot.

In September of 2001 the Denali National Park Hotel closed. Growth outside the park has increased the capability of the local community to provide services such as dining and lodging that were historically on park lands for practical reasons. On the other hand, Denali currently has no interpretive, educational, or interactive facility in the entrance area that establishes a "first-contact" identity of the park for visitors, nor does it have a facility to present programs for extended learning.

To improve upon the development concepts already approved in the DCP/EIS, the primary objectives of the proposed action would be to provide over 90% of park visitors with opportunities for resource-based experiences in the entrance area of Denali as well as to establish a quality science and learning center for those visitors participating in extended educational programs. Other objectives are to improve vehicle and pedestrian circulation and provide a safe

environment for visitors traveling to and from the railroad depot, and to evaluate the development required under the new principal park concession contract

The exact location and design of the depot remained open upon completion of the DCP/EIS. During implementation of the plan, the decision was made to retain the airstrip in the entrance area and to locate the new railroad depot at or near the site of the current building (1999 Environmental Assessment for the Expansion of the Alaska Railroad Depot).

This EA analyzes the NPS preferred action and alternatives for the entrance area of Denali National Park and Preserve and has been prepared according to the National Environmental Policy Act of 1969 and regulations of the Council of Environmental Quality (40 CFR 1508.9).

Background

The entrance area of Denali National Park and Preserve serves as a staging area for bus tours to the park's interior (Figure 1). The Visitor Transportation System (VTS or shuttle bus), tour bus systems, and Kantishna lodge buses take visitors into the park's interior on the park road. For those visitors not taking a shuttle or tour bus into the interior, the entrance area and the first 15 miles of the park road provide their primary park experience. Facilities and services in the park entrance area currently include the Visitor Access Center (VAC), NPS interpretive programs, Riley Creek and Morino Campgrounds, the railroad depot, the airstrip, a network of hiking trails, the sled dog kennels at park headquarters, Riley Creek Mercantile, and support facilities for the concessionaire. The park hotel and dining service complex closed in September 2001.

The 1994 Environmental Assessment on *the Proposed Construction of Visitor Transportation System Facilities* (USDOI, NPS, 1994) (VTS EA) is incorporated by reference and summarized below. This EA evaluated projects associated with expanded VTS operations, including a larger bus and employee parking lot, a new employee dining facility, an additional concession dormitory and bath house, a fueling island and an additional utility corridor. A contract has been awarded to expand the bus and employee parking lots to their 4-acre limit. Three approved projects – the new employee dining facility, a four-plex concessionaire manager's housing unit and a winter leach field – have not been implemented.

The DCP/EIS (USDOI, NPS, 1996) is incorporated by reference and summarized below. This plan amended the 1986 GMP for the entrance area and road corridor or "frontcountry" of Denali to provide specific direction for road management and facility development to meet the needs of the public for the next 15-20 years. The plan provides for visitor facilities and services in the frontcountry to meet a wide range of visitor needs and interests. In that plan, changes in the frontcountry were limited to actions in which the NPS has traditionally specialized, such as interpretive centers, environmental education opportunities, trails, campgrounds, and resource protection programs.

The Record of Decision for the DCP/EIS calls for:

- Demolition of the park hotel and construction of an environmental education facility that incorporates the existing auditorium and other buildings.

- Expansion and renovation of the existing VAC from 7,000 square feet to 14,000 square feet. It is to be adapted for use as a traditional interpretive visitor center and theater.
- Construction of a new visitor services building and parking lot near the VAC.
- Construction of a new camper convenience services facility along with the removal of the existing store and temporary shower building.
- Fast food/deli service near the visitor center and visitor services facilities.
- Development of new campsites in the entrance area and the Nenana River corridor.
- Expansion of the Alaska Natural History Association (ANHA) sales outlet for books and educational materials at the new VC and at the DSLC.

The 1999 EA for *the Expansion of the Alaska Railroad Depot* (Depot EA) is incorporated by reference and summarized below. This EA is a project-specific environmental impact analysis that is tiered to the DCP/EIS. This project proposed to improve the layout of the railroad depot, parking lots and access roads in order to decrease congestion, assure vehicular and pedestrian safety, provide visitor services in a park-oriented depot facility and plan for increased railroad use.

Both the DCP/EIS and Depot EA focus on creating both visual and pedestrian links between the science and learning center and the depot. This EA tiers from the Record of Decision on the DCP/EIS, specifically to construct a visitor center, a science and learning center and associated facilities, and also incorporates other planning decisions to improve depot and concession facilities.

Implementation of the entrance area plan is continuing with general programming for all facilities and the design of several development components. The park hotel closed after the 2001 season, resulting in no public lodging or dining facilities at that site. The two modular units and the west wing of the former park hotel have been transferred to private entities and moved to locations outside the park for reuse. The McKinley Mercantile near the former hotel closed at the end of the 2001 season. Camper convenience services such as a general store and showers will be provided at the new Riley Creek Mercantile near the Riley Creek Campground. The Riley Creek Campground rehab and expansion project will be completed in 2002, with two loops open for summer use during the 2002 summer season. Bus maintenance activities will continue at the bus barn. The development of an Interpretive Plan is in progress and a transportation study evaluating front country traffic flow and circulation has been completed.

The NPS will issue a prospectus in early 2002 for the principal park concession contract. The principal commercial activities to be authorized in the new contract are bus tours and visitor transportation along the park road. The contract will require actions and the construction of new facilities to support the concession activities. Those new facilities are included in the alternatives of this environmental assessment. Continuing bus tours and other concession services represent no change to existing conditions.

Figure 1. Project Location

Legal Context

The 1916 Organic Act directed the Secretary of the Interior and the NPS to manage national parks and monuments to:

> "…conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." (16 U.S.C. 1.)

The Organic Act also granted the Secretary the authority to implement "rules and regulations as he may deem necessary or proper for the use and management of the parks, monuments and reservations under the jurisdiction of the National Park Service." (16 U.S.C. 3.)

In 1917, Congress established Mount McKinley National Park:

> "…as a public park for the benefit and enjoyment of the people . . . for recreation purposes by the public and for the preservation of animals, birds, and fish and for the preservation of the natural curiosities and scenic beauties thereof . . . said park shall be, and is hereby established as a game refuge". (39 Statute 938).

Additions to the park were made in 1922 and 1932 to provide increased protection for park values and, in particular, wildlife. The 1932 addition moved the eastern park boundary from a north-south line near park headquarters to the western bank of the Nenana River, including a right-of-way for the Alaska Railroad. An act in 1940 appropriated funds to provide "for adequate housing, feeding, and transportation of the visiting public and residents of Mount McKinley National Park in Alaska" in the vicinity of the railroad.

1978 amendments to the 1916 NPS Organic Act and 1970 NPS General Authorities Act expressly articulated the role of the national park system in ecosystem protection. The amendments further reinforce the primary mandate of preservation by stating:

> "The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided for by Congress." (16 U.S.C. 1-a1.)

The Alaska National Interest Lands and Conservation Act of 1980 (ANILCA) added approximately 2,426,000 acres of pubic land to Mt. McKinley National Park and approximately 1,330,000 acres of public land as Denali National Preserve and re-designated the entirety Denali National Park and Preserve. ANILCA directs the NPS to preserve the natural and cultural resources in the park and preserve for the benefit, use, education, and inspiration of present and future generations. The Act further directs the NPS to manage for the continuation of customary and traditional subsistence uses in the park and preserve additions in accordance with provisions in Title VIII.

The NPS Organic Act and the General Authorities Act prohibit impairment of park resources and values. The 2001 NPS Management Policies uses the terms "resources and values" to mean the full spectrum of tangible and intangible attributes for which the park is established and managed, including the Organic Act's fundamental purpose and any additional purposes as stated in the park's establishing legislation. The impairment of park resources and values may not be allowed unless directly and specifically provided by statute. The primary responsibility of the NPS is to ensure that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

The evaluation of whether impacts of a proposed action would lead to an impairment of park resources and values is included in this environmental assessment. Impairment is more likely when there are potential impacts to a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified as a goal in the park's general management plan or other relevant NPS planning documents.

Issues

A brief statement of the environmental concerns is provided here for each issue or topic that is identified and analyzed in the DCP/EIS. The issues in this EA are re-evaluated in Part IV, the Environmental Consequences of the Alternatives.

Vegetation and Soils

Mixed white spruce and hardwood forest vegetation would be removed or disturbed during the construction of new visitor facilities in the entrance area.

Existing soil strata would be altered or removed and land contours would be changed as a result of construction of the proposed entrance area facilities and realignment of the park road.

Wetlands

Wetlands would be filled or disturbed by the proposed development and road realignment in the entrance area. NPS guidelines require 1:1 compensation for impacts to wetlands, and a Wetlands Statement of Findings is attached as Appendix B

Wildlife and Habitat

Entrance area development and realignment of the park road would reduce wildlife habitat. The construction activities would temporarily produce noise and activity levels that would disturb wildlife and cause them to disperse from adjacent areas during the construction period.

Air Quality

As described in the DCP/EIS, local air quality could be reduced by heavy machinery emissions during construction activities.

Water Resources
As evaluated in the DCP/EIS, water quality could be reduced by siltation and pollutants from the use of heavy construction machinery.

Cultural Resources
A minor cultural resource site would be affected by proposed development in the hotel area and the realignment of the park road.

Visitor Use and Recreation
Recreational and educational opportunities for park visitors would increase with the construction of a visitor center and extended program campus. Recreational opportunities in the winter would be enhanced by the construction of a winter contact station.

Recreational opportunities for visitors would temporarily be affected by the construction of new facilities, the removal of existing facilities in the entrance area and the realignment of the park road.

Visual Resources
New buildings and parking lots could affect the scenery and visual quality of the area. Visual quality would increase with the removal of dilapidated structures.

Park Management
The proposed expansion of visitor facilities and destinations in the entrance area would meet the goals of providing resource-based experiences for 90% of park visitors. It would create additional visitor demand and visitation to the park that would affect park operations such as transportation, construction and maintenance, and staffing.

Local Communities/Socioeconomic Resources
New visitor facilities and destinations, including a winter contact station, could positively affect the socioeconomic resources of the local businesses and communities. Increasing the length of shoulder seasons and providing additional visitor destinations will encourage longer visitors stays. The removal of Morino Campground could create more demand for camping opportunities in the local communities.

Issues Eliminated from Further Consideration

Threatened and Endangered Species
The Endangered Species Act requires an analysis of impacts on all federally listed threatened and endangered species, as well as species of special concern. In compliance with Section 7 of the Act, the U.S. Fish and Wildlife Service (USFWS) has been consulted. No Federally designated threatened or endangered species are known to occur within Denali National Park (personal communication. Ted Swem, USFWS, Fairbanks, Alaska, June 9, 2000), and none are anticipated to be affected by this plan.

Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations,* requires all federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. This plan would not result in significant changes in the socioeconomic environment of the area, and therefore is expected to have no direct or indirect impacts to minority or low-income populations or communities.

Floodplains

No floodplains exist in the project area. Executive Order 11988 (Floodplain Management) is not addressed in this EA.

Subsistence

Subsistence is eliminated from further evaluation in this EA because subsistence activities are not allowed in the project area. As required by ANILCA § 810 an evaluation is attached in Appendix A.

Wilderness

The proposed areas for the expansion and improvements to the entrance area of Denali National Park and Preserve are not located inside designated wilderness boundaries. All project areas are in areas found to be not suitable for wilderness designation (GMP, NPS, 1986) nor were any of the areas proposed for development recommended for wilderness designation in any of the alternatives in the EIS on *Wilderness Recommendations for Denali National Park and Preserve* (NPS 1988). Additionally, noise generated by project activities would not be expected to affect solitude in any adjacent wilderness areas.

Permits and Approvals Needed to Complete the Project

Executive Order 11990 (Protection of Wetlands) requires the NPS, and other federal agencies, to evaluate the impacts its actions are likely to have on wetlands. The executive order requires that short- and long-term adverse impacts associated with occupancy, modification or destruction of wetlands be avoided whenever possible. Indirect support of development and new construction in such areas should also be avoided wherever there is a practicable alternative. The NPS Wetland Protection and Procedural Manual 77-1: Wetland Protection, emphasizes exploring all practical alternatives to building on, or otherwise affecting, wetlands; reducing impacts to wetlands whenever possible; and providing direct compensation of wetland resources by restoring degraded or destroyed wetlands on other NPS properties. This evaluation is found in the Statement of Findings (SOF) in Appendix B.

Permits would be needed from the Alaska Department of Environmental Conservation for wastewater and solid waste disposal. A permit may be needed from the Environmental Protection Agency for storm water management.

II. DESCRIPTION OF THE ALTERNATIVES

Actions Common to all Action Alternatives

Decisions previously documented in Denali entrance area environmental documents will continue to be part of this development unless specifically altered in the proposed action. Highlights of these plans include:

Bus tours and visitor transportation into the interior of the park and bus transportation around the entrance area would continue as specified in the park's 1986 GMP and the 1996 DCP/EIS.

The Alaska Railroad (AKRR) would develop new passenger shelters and construct a new depot and comfort station on their 200-foot wide exclusive use easement. The NPS has entered into a Memorandum of Agreement with the AKRR to permit use of adjacent park lands to expand vehicular parking and circulation. Surface water runoff from the depot parking expansion would be channeled under the tracks and airstrip to disperse in the forest east of the airstrip. The Agreement would also allow the NPS to develop the AKRR "Y" easement, currently the site leased for the U.S. Post Office, for visitor facilities. The Denali Park Post Office would be temporarily set up on the former RV dump station parking lot east of loop #1 of the Riley Creek Campground until the U.S. Postal Service selects a permanent site.

The hotel powerhouse would remain and house the electric generator to back-up the regional commercial power. The bus and employee parking lots are currently gravel surfaced and have a dust palliative applied, but they would be paved when funding allows.

An entrance station would be constructed between the Parks Highway and the entrance to the Riley Creek Campground. NPS employees at the entrance station would check and sell park passes and collect entrance fees. (The fee area covers the whole park.) The entrance station area would include expanded traffic lanes, including at least one lane for administrative and other local traffic.

The existing trail system in the entrance area would be upgraded, accessibility improved and routine maintenance provided. New trails would include a 1-mile, accessible loop trail near the Riley Creek Campground to highlight cultural resources, and would also include a new bridge and one mile re-route at the northern end for the 7-mile long Triple Lakes Trail. The Rock Creek Trail would be re-routed to avoid the steep sections near the hotel water tank.

Alternative 1 -Construct Visitor and Learning Centers by the Depot (NPS Preferred and Environmentally Preferred Alternative)

This alternative would provide facilities for interpretation and learning for over 90% of park visitors entering the park. The key components would be a visitor center campus and the Denali Science and Learning Center (DSLC) that would offer opportunities for multiple resource-based experiences in Denali's entrance area, including extended programs (see Figures 2 and 3). A new 14,500-sq. ft. visitor center would be built adjacent to the former hotel site along with a new theater seating between 275-300 people, food court and sales facility. Space at the plaza would

be set aside for an art gallery to be added later. The park road would be re-routed to allow creation of a plaza and pedestrian area connecting the visitor center to an expanded depot.

The hotel structures would be removed in phases as replacements are constructed. The visitor lodging buildings were removed in the fall of 2001. The auditorium and McKinley Mercantile would be salvaged or razed to allow construction of the road. Other facilities not in the path of the new road alignment could remain during the summer of 2002, could be removed, or could be moved to disturbed sites nearby for temporary re-use. Harrison Hall would continue as the employee dining facility during the 2002 summer and would then either be torn down or relocated. A temporary employee dining facility for use in 2003 would be constructed west of the bus barn maintenance lot. This building would become an employee recreation center in 2004. Approximately 200 concession employees would seasonally occupy existing housing units in the area east of the bus barn. A new 2,000 square foot box lunch preparation facility would be constructed at the current site, replacing a dilapidated modular structure.

The new DSLC would be constructed to facilitate research to support the conservation and protection of the park as well as provide education about park science. It would serve school groups, individuals, researchers and other groups with the capacity for extended programs beginning in 2004. The DSLC campus would be located in the area north of the new alignment for the park road and south of Horseshoe Creek. Campus buildings would include a science building, a residential area with small dorms, an administrative building, and an education building. The education building would also serve as a winter visitor contact station for the park and outlet for ANHA sales. The existing hotel gift shop would be relocated to the DSLS campus for adaptive reuse in support of administrative and science functions. A new dining facility serving both the concession employees and the DSLC users would be constructed on the present volleyball court and would open in 2004. Service truck access to the dining kitchen would be the only large vehicle road into the campus. A replacement volleyball court would be constructed near the proposed employee recreation center. Water for the DSLC residential buildings would be provided from either the Horseshoe well or via a connection to the recently constructed winter water line to the former hotel area. Waster water from the residential facilities would be treated onsite with a septic tank and leach field. The other DSLC facilities would be connected to the entrance area sewer lagoon in the summer and would utilize an onsite disposal system such as a septic tank and leach field during the winter months.

A new site and access road on the western side of the bus parking lot would replace the existing fueling site. The new fueling site would need to accommodate tanks for unleaded gas, diesel, bio-diesel, and liquefied natural gas. Facilities for a 500-gallon bio-fuels tank would be installed at the new fueling site, and three buses would use bio-fuels as part of a test. The natural gas fueling facility would also require a 40-foot long structure to house the vaporization and compression equipment necessary to provide compressed natural gas for converted buses. The system would also include a 30-foot long containment basin and 20-foot tall evaporative fins. An exit road for the fueling facility and south end of the bus and staff parking lots would be constructed to the park road when needed.

Logistics functions such as bus ticketing, campground reservations, backcountry reservations and general information would remain at the Visitor Access Center (VAC), although the visitor

center campus site development plan allows space to transfer the VAC functions to that site should a future review indicate a need.

The park road would be re-aligned to pass west of the visitor center campus, and part of the existing park road would become a dedicated entrance to the depot area. In order to reduce the number of intersections, a roundabout (circle) would be constructed north of the depot, with exits for the park road continuing west, the visitor center campus parking area, and for the depot. The existing hotel exit road would be widened to two lanes, designed for 25 mile per hour traffic flow, and have the junction with the park road altered to a smooth curve. Construction of the new alignment would begin in June 2002.

Additional parking and vehicle circulation areas would be constructed at the existing depot site. The access road to the depot would be re-routed to utilize part of the present park road and provide more space. The existing depot may be replaced with a larger facility that could have space for NPS interpretive exhibits and possibly a post office. Additional passenger shelters would be constructed along the tracks north and south of the depot. Pedestrian safety would be improved through increased separation between the train and vehicular circulation.

The 60-site Morino Campground would remain open for the 2002 season and then close in 2003, when all of the Riley Creek Campground loops are open, including approximately half of loop #1 that is being converted to walk-in only sites.

The concession-operated gift shop formerly located at the Park Hotel would be replaced by a facility having half the gift and souvenir retail space. The new facility will also offer an expansion of sales by ANHA for items that are primarily of an educational or interpretive nature.

Trails would be re-routed to provide access to the new facilities and to provide access from the new facilities to the backcountry such as to the Triple Lakes area, the Mt. Healy overlook, and the Rock Creek Trail. See figures 5 and 6.

This alternative is identified as the Environmentally Preferred Alternative. Even though the No Action Alternative directly affects the least wildlife habitat and vegetation acreage, the long-term protection of park resources would be best ensured by facilitating the opportunities for most visitors to have resource-based experiences and by providing a quality in-park research and education program. This alternative best provides a safe, aesthetic, and effective set of facilities to enhance visitor use and enjoyment of Denali.

Alternative 2 –Implement Previously Approved Entrance Area Plans

This alternative combines development actions approved in three previous public planning and compliance documents: The 1994 VTS EA, the 1996 DCP/EIS, and the 1999 Depot EA (see Figures 4 and 5). Preliminary construction drawings for the visitor services campus indicated a need to expand the footprint presented in the DCP/EIS. This need will be represented in the Environmental Consequences section (Chapter IV) by using a range of acres of disturbance.

Under these plans, the existing visitor access center site would be expanded into a visitor center campus. The VAC would be expanded from 7,000 square feet to 14,000 square feet and adapted for use as a traditional interpretive visitor center. An expanded ANHA sales outlet and the 153-seat theater would remain in the building, and a new 299-seat theater would be constructed near the visitor center. Other logistics and service functions such as ticketing, campground reservations, backcountry reservations, and food service would be moved to a new visitor services building adjacent to the expanded visitor center. A new 250 vehicle parking lot would be constructed southeast of the existing VAC parking lot. Concessionaire services would continue.

Some of the existing buildings at the hotel site, including the auditorium, would be adaptively used for a DSLC. Extended programs for researchers, Elderhostel-type groups, school groups, individuals and other groups would be developed. Overnight accommodations for up to 50 users of the center would be provided in former concession housing. The center would ultimately include classrooms, a library, a science laboratory, and other functions. An arrangement could be made with the concessionaire to provide food service for the DSLC in the existing employee dining area, or a new dining hall would be constructed north of the powerhouse. The DSLC would utilize an onsite disposal system such as a septic tank and leach field during the winter months.

Approximately 200 concession employees would seasonally occupy existing or upgraded housing units in the area east of the bus barn. A four-plex of apartments would be constructed next to the northernmost dorm for use by concession employees. Facilities for a 500-gallon bio-fuels tank would be installed at the existing fueling island, and three buses would use bio-fuels as part of a test.

The railroad depot facilities would be changed in a plan similar to Alternative 1. Additional parking and vehicle circulation areas would be constructed at a new 15,000 square foot railroad depot on the existing depot site. A 1,800-foot long realignment of the park road away from the site would provide room for the expanded parking and circulation serving the depot.

The 60-site Morino Campground would remain open for visitors without vehicles.

Alternative 3 - Existing Conditions (No Action Alternative)

This alternative represents the status quo and is included for comparison purposes only to serve as a benchmark from which to measure adverse or beneficial impacts of the action alternatives (see Figures 5 and 6). A decision has been made to develop visitor facilities in the entrance area in the DCP/EIS.

Under this alternative the park's bus systems, store, reservations and bus and campground ticketing, and some other functions are operated under a concessions contract, with concessioner employee housing continuing in the dorms, A-frames and condo units. Harrison Hall would remain as the dining facility for the concessioner employees. The hotel auditorium would be available for interpretive programs.

The park hotel closed after the 2001 season, resulting in no public lodging or dining facilities at that site. The two modular units and the west wing of the former park hotel have been transferred to private entities and moved to locations outside the park for reuse. The hotel gift shop and lobby are closed.

Logistics functions such as bus ticketing, campground reservations, backcountry reservations and general information would remain at the Visitor Access Center (VAC). There would be no visitor center for in-depth information and programs. There would be no environmental education/science center established in the park for extending learning and research programs.

Bus maintenance activities would continue at the bus barn. The bus parking lot and employee parking lot are under contract to expanded to the full 4 acres allowed under the 1994 plan for VTS improvements, and the existing bus fueling island would remain.

Camper convenience services such as a general store, fast food and deli service, showers, and perhaps laundry would be provided at the new Riley Creek Mercantile near the Riley Creek Campground. The third loop of the Riley Creek Campground would open in 2002, although rehabilitation work on the older two loops would close one of them at a time during the 2002 season. The 60-site Morino Walk-in Campground would remain open. The post office could remain at its present location or could be removed temporarily to a previously disturbed site.

The AKRR could construct new facilities such as passenger shelters and a depot on their 200-foot wide exclusive use easement. The park road would not be realigned near the depot. No additional parking and circulation for the depot would be constructed on park land not under the easement.

No new trails would be constructed in the entrance area, including a proposed cultural resources trail, re-route of the Rock Creek Trail, and re-route of the northern mile of the Triple Lakes Trail.

Mitigation and Monitoring

Mitigation measures are specific actions that when implemented reduce impacts, protect park resources, and protect visitors. The following mitigation would be implemented under each action alternative and are assumed in the analysis of effects.

Vegetation. As part of the restoration process, abandoned roads and other disturbed areas within the project area would be restored with native vegetation. Landscaping and replanting native vegetation would occur around the new development area. Replanting with native vegetation would replace portions of the habitat lost from the construction operations. The park will attempt to preserve a small colony of ladyslipper orchids (*Cyprepedium guttatum)* in its current location. If this would impede site circulation, cause adverse design constraints or if nearby construction threatens the survival of the orchids, the colony will be carefully transplanted to a suitable location under the oversight of the park's plant ecologist. Periodic surveys will be conducted to determine the presence of exotic plants.

Water Resources. Measures to reduce surface water run-off and flooding of downhill facilities, including the AKRR Depot and NPS airstrip, would be incorporated into both alternatives. NPS and

AKRR engineers and contractor would work together to determine surface drainage patterns. These patterns would be considered in the design and structure of the access roads, parking lots, and new entrance area facilities.

Wetlands. The Statement of Findings, located in Appendix B, addresses wetland compensation and mitigation. In summary, a 1.1-acre riparian area on Caribou Creek in the Kantishna Hills region of the park would be restored to provide direct compensation for the low quality wetlands lost in the railroad depot expansion project. Silt fences would protect wetlands in the area not directly affected by construction.

Wildlife and Habitat. The NPS, concessionaire, and contractors would follow established guidelines in the park's bear-human conflict management plan. The plan requires operators to use bear-proof containers for food and refuse and sets up guidelines for temporary closures.

Cultural Resources. Surveys for cultural resources have taken place over the past two decades. One known site (SI91-1) would be documented prior to construction activities. An assessment of effect has been made and the site has been determined to be not eligible for the National Register of Historic Places. If previously unknown cultural resources were located during construction, the project would be halted in the discovery area until cultural resource staff could determine the significance of the finding.

Visitor Use and Recreation. Construction phasing would be coordinated with the AKRR and the park concessionaire to minimize traffic delays on the park road. Road realignment work would be completed before starting construction on the existing road near the depot. Construction activities creating lengthy traffic delays on the park road would be restricted to periods of low visitor use, such as evenings and during the off-season. Visitor impact is expected, so an educational program with information and interpretive signs would be implemented. Barricades would be placed around the construction sites to prevent visitor entry.

Visual Resources. Vegetative buffers approximately 30 to 40 feet in width would be established or maintained between the Denali Park Road and parking areas and new structures to minimize adverse visual impacts to park visitors. Parking areas would be broken into smaller parking pods and curved to reduce the overall visual impact. Vegetated islands would be established in larger parking areas. Previously disturbed sites would be vegetated with native materials to provide buffers between roads and new construction.

Safety. Heavy construction would be scheduled either during the off-hours of visitor use or during the shoulder season to reduce hazards to visitors. The park superintendent or authorized delegate may authorize scheduling changes. Work activities that might impact park operations, such as utility shutdowns, would be scheduled during the off hours or during periods of low visitation. Normal construction activity would be limited to daytime hours during the summer season (typically 7:00 a.m. to 7:00 p.m. seven days per week).

The following information would apply to **alternative 1**: Visitors would not be allowed in the areas of the former hotel area during active construction without permission from the

superintendent or delegate. Service traffic associated with the operation of the dining facility would be the only public or concession allowed vehicles to enter the hotel site.

Figure 2. Alternative 1 – Construct Visitor and Learning Centers near Depot (Preferred Alternative)

Figure 3. Alternative 1 – Visitor Center and Learning Center Areas (Preferred Alternative)

Figure 4. Alternative 2 – Implement Approved Entrance Area Plans

Table 1. Comparison of the Alternatives

Facility	Alt. 1 Construct VC and DSLC near Depot(Preferred)	Alt. 2 Implement Approved Entrance Area Plans	Alt. 3 Existing Conditions (No Action)
Visitor Center (VC)	Construct New VC/Theater near RR depot (approx. 14,500 sq. ft.)	Rehabilitate and Expand VAC (from 7000 sq. ft. to 14,000 sq. ft.)	None
Art Gallery	Construct New Facility	None	None
Visitor Services Facility (VAC)			
Ticketing and Reservations	Rehab VAC	Construct New near VAC	Existing at VAC
Food Service	Construct New near VC	Construct New near VAC	None
Sales	Construct New near VC	Expand or Construct New near VAC	ANHA at VAC
Mercantile	New in 2002	New in 2002	New in 2002
Visitor Parking	Construct 250 new spaces at VC	Expand at VAC by 250 spaces	No new
Entrance Station	Construct New Facility Construct New Entrance Sign	Construct New Facility Construct New Entrance Sign	None
Morino Campground	Close	Leave open	Leave open
Post Office	Relocate old building then Construct New	Construct New	Old building stays or moves temporarily
Science and Learning Center	Use Site North of Hotel site Relocate/Rehab Hotel Building (Gift Shop) Construct New Education Facilities. Re-use some Concession Housing and Construct New Dorms	Hotel Use Hotel Site Rehab Hotel Buildings (Dorms, Auditorium) Construct New Education Facilities Re-use Concession Housing	None
AKRR Depot*	Construct New Depot and Parking	Construct New Depot and Parking	Construct on easement
Road Relocation*	Relocate Park Road between VC and bus maintenance area	Relocate Park Road near AKRR depot	None
Trails	Rehab and Construct New	Rehab and Construct New	No new
Picnic Areas	Construct 2 New at: Visitor Center, VAC	Construct 2 New at: Visitor Services Building, DSLC	Existing at RCCG Overflow Parking Lot
LNG Plant	Construct New LNG Plant	None	None
Bus Fueling Facility	Relocate Facility	Existing	Existing
Water/Wastewater Utilities	Upgrade and Expand	Upgrade and Expand	Existing
Employee Rec. Facility	Construct New Facility New volleyball court	None Keep existing volleyball court	None Keep existing volleyball court
Conc. Managers' Housing**	Construct New	Construct New	No new
Concession Empl. Dining**	Construct New	Construct New	Existing

*Covered in 1999 Supplemental EA

**Covered in 1994 VTS EA

Table 2. Summary Impacts of the Alternatives

IMPACT TOPIC	ALT. 1 Construct VC-DSLC by Depot- *Preferred*	ALT. 2 Implement Approved Area Plans	ALT. 3 No Action
Vegetation/Soils	Up to 13 acres of vegetation and soils disturbed and about 3.3 acres restored.	Up to 12 acres of vegetation and soils disturbed and about 1.8 acres restored.	0.5 acre vegetation and soils restored at former hotel site.
Wildlife/Habitat	Net loss of up to 10 acres of wildlife habitat results in minor impact to wildlife.	Net loss of up to 11 acres of wildlife habitat results in minor impact to wildlife.	0.5 acres of habitat gain and less local disturbance of wildlife by humans.
Wetlands	1.1 acres of low value forested and scrub-shrub wetlands impacted.	1.1 acres of low value forested and scrub-shrub wetlands impacted.	No impacts
Air Quality	Temporary local minor adverse impacts during construction. Small seasonal increases in emissions to heat DSLC buildings in winter. Small reduction in vehicle emissions with LNG facility.	Temporary local minor adverse impacts during construction. Small seasonal emissions increase to heat DSLC buildings in winter.	No impacts.
Water Resources	Surface runoff effects reduced with biofiltration swales. Increased winter demand for drinking water at DSLC, but impacts to water resources negligible.	Increased surface runoff likely. Increased winter demand for drinking water at DSLC, but impacts to water resources negligible.	Negligible improvement to water quality from reduced runoff due to 0.5-acre restoration.
Cultural Resources	One pit and can burn site potentially buried under plaza. Site documented	One pit and can burn site buried under road re-alignment. Site documented.	No impacts.
Visual Resources	Limited adverse impacts to visual quality from trails viewpoints, but vegetation buffers minimize impacts.	Limited adverse impacts to visual quality from trails viewpoints, but vegetation buffers minimize impacts.	Minor effects. Abandoned buildings at hotel site an eyesore.
Visitor Use & Recreation	Visitor use in entrance area enhanced with new VC, DSLC, and other facilities. New buildings designed for new uses.	Visitor use in entrance area enhanced with new VC, DSLC, and other facilities. Existing buildings difficult to adapt to new uses.	Visitor facilities in entrance area reduced, and services remain limited and in scattered locations.
Park Management	Fully meets NPS objective for improved visitor information and education. About 90% of visitors make contact with NPS visitor services.	Does not fully meet NPS objective for improved visitor information and education. About 50% of visitors make contact with NPS visitor services.	Fails to meet NPS objective for improved visitor information and education. About 34% of visitors make contact with NPS or concession visitor services.
Local Economy	Minor increase in local winter economy due to 100 individuals and students in park for educational programs. NPS campsites reduced by 60 sites. Total NPS campsites in entrance area = 148, or 21% of total 706 area sites.	Minor increase in local shoulder season economy. 50 individuals in park for educational programs. No campsites closed. Total NPS campsites in entrance area = 208 or 27% of 766 sites.	All entrance area overnight visitor accommodations located outside park, except existing 208 campsites or 27% of 766 local area sites.

III. AFFECTED ENVIRONMENT

Detailed descriptions of the environment in the Denali Park Hotel area may be found in the 1986 GMP and the 1996 DCP/EIS. This section summarizes the natural and human environment that may be affected by the proposal and alternatives under consideration.

The project is located in T. 14 S., R. 7 W. in Denali National Park and Preserve. It is at mile 1.5 of the Denali Park Road. The area is located in the Denali front country, an area with high visitor use during the summer season.

Vegetation and Soils, Including Wetlands

Historically vegetation in the Denali Park Hotel area has seen change. In the 1920s, a number of fires burned over the area. In 1939, when the first Park Hotel opened, mostly low shrubs and immature aspen and spruce trees dominated the area. Now taiga forest plant associations occur with mature white spruce and aspen dominating the vegetation. A variety of plant species comprise the understory, including alder, willows, Labrador tea, blueberry shrubs, and Alaska rose.

Two generic soil types occur in the project area. One soils type underlies forested areas and is gravelly, silty soil with humus layers supporting mosses and lichens. The second soil type occurs in wetland areas, which consist mostly of poorly drained clays.

Tall willow and hybrids of black and white spruce dominate wetlands located in the proposed project area. These wetlands are classified in the Cowardin Classification System (Cowardin et. al. 1979) as palustrine scrub-shrub, broad-leaved deciduous, seasonally flooded wetlands (PSS1B) and palustrine forested, needle-leaved evergreen, seasonally flooded wetlands (PF04B). The wetlands dominated by tall willows occupy about 0.2 acres down the middle of the wetland area where spring snowmelt forms an intermittent drainage. The wetlands dominated by spruce form about 0.9 acres of wetlands. See figures 3 and 6 for locations and an outline of the wetlands.

Wildlife and Habitat

The most common wildlife species in the project area are red fox, snowshoe hares, red squirrels, and various birds such as chickadees, ravens, magpies, and numerous migratory species. The area also provides moose habitat, including potential calving areas. Grizzly bears are attracted to the area during moose calving season. Wetland areas provide important foraging areas for moose and habitat for migratory and resident birds.

Visual Quality

The scenic quality of the entrance area of the park has evolved since the 1920s when over 9,000 acres burned in the entrance area and Riley Creek drainage. The park hotel and railroad depot stood out for many decades among the recovering vegetation. The park hotel was quickly replaced after a fire in 1972, and facilities surrounding the hotel have expanded slowly since

then. Additional developments and visual impacts occurred after the completion of the George Parks Highway in 1971. Most of these facilities were not visible to visitors arriving by train or vehicle, unless they were staying at the hotel. The VAC is visible to most visitors entering the park because it protrudes above treetops, but most entrance area facilities are not visible unless the visitor hikes up to higher elevations in the vicinity.

Air Quality

Denali National Park and Preserve is a Federal Class 1 Air Quality Area under the Clean Air Act of 1977. Air quality is monitored near park headquarters through national networks: National Atmospheric Deposition Program (NADP for acid rain), Interagency Monitoring of protected Visual Environments (IMPROVE for haze and particulate monitoring), and the NPS ozone monitoring network. Denali documents some of the nation's best air quality.

Water Resources

Horseshoe Creek lies north of the project area and its waters flow easterly toward Horseshoe Lake and the Nenana River. The main water supply for entrance area facilities is derived from the intake gallery on Horseshoe Creek about one quarter mile upstream of any buildings. The Horseshoe well supplies water during shoulder seasons and winter to existing year-round facilities with a rate of about 5 gallons per minute or 7,200 gallons per day. Hines and Riley Creeks lie south of the project area and also flow easterly to the Nenana River. Surface area runoff from snowmelt and summer rains flow in an easterly direction toward the AKRR tracks and NPS airstrip and has not created surface water channels.

Cultural Resources

Cultural resources in the park entrance area include archeological sites and historic buildings and structures. Approximately 25 cultural sites and features are located in the entrance area. Historic sites associated with the McKinley Park Station community are located near the park airstrip and Riley Creek. These include cabin foundations, fox pens, and other cultural remains. Numerous sites around the hotel complex include both archeological and historic features.

Most of the sites in the entrance area are outside the footprint of the proposed developments. However, one site (SI91-1), a pit and can burn located in the wooded area southeast of the former hotel site and west of the park road, is inside the project footprint. This site has been evaluated by the State Historic Preservation Office as not significant. An archeological site above the proposed bus parking area would be outside of the proposed development footprint.

Visitor Use and Services, Including Access and Safety

Around 400,000 people visit Denali's entrance area to annually. About 280,000 people take a bus trip beyond the Savage River check station into the park interior and the remaining visitors remain in the front country area, seeing this section of the park by the Savage Shuttle, private car, by bicycle, or on foot. Additional capacity is available on all park transportation systems. Park bus use has declined eight percent since 1999, but visitation of all types is expected to

increase over the next 10-15 years. The entrance area functions as the staging area for shuttle bus transportation to visit the park interior; however, about 190,000 visitors on the tour buses do not visit NPS entrance area facilities. About 200,000 visitors enter and leave the park at the AKRR depot each summer.

The Denali Park Road lies about 100 feet west of the depot buildings, 200 feet west of the railroad tracks, and 500 or more feet east of the former park hotel site. Although the vehicle speed limit here is 25 miles per hour, the proximity of the throughway into the park and hundreds of visitors walking between visitor facilities produce significant safety concerns.

Logistics functions such as bus ticketing, campground reservations, and backcountry permitting remain at the VAC. The Morino campground has 60 walk-in campsites. The Riley Creek Campground has 102 campsites and will have 145 campsites in 2003. Numerous trails link the campgrounds, VAC, depot, airstrip, former hotel area, park headquarters, and the Nenana River corridor. Presently there is no visitor center or interpretive and educational facility in the entrance area of the park.

Park Management

The NPS has a contract with a concessionaire to provide public services including transportation, bus and campground reservations, food services, gift sales, camper merchandise and showers. Concession facilities in the area include the shuttle bus parking and maintenance facility, dormitories and apartments for seasonal employees, and laundry facilities. The NPS provides interpretive programs at the campgrounds, at the VAC theater, and at various other sites in the entrance area for guided walks. The NPS also gave interpretive programs in a 299-seat auditorium by the former park hotel, but this structure is scheduled for removal in June 2002 and would be replaced under both action alternatives. The NPS operates a power plant with back-up generator for the entrance area electricity. One loop of the Riley Creek Campground is kept open during winter without running water. This loop and park administrative headquarters are the only current visitor services available in the park during winter.

Local Community Socio-Economic Resources

The social and economic environment for the Denali entrance area is described in considerable detail in the 1996 DCP/EIS (pp. 146-155), and overall conditions are similar now. June, July, and August continue to be the busiest months of the year. Visitation has decreased slightly from 1999 to about 400,000 visits each year. Construction of hotels just outside the park entrance began in the late 1970s, and today there are over 1,000 rooms within one mile of the park entrance. Since 1995 new hotel rooms have opened each year in the entrance area, and total bed space in the vicinity between Cantwell and Healy is now over 2,000 rooms and cabins. In May of 2001 the Grande Denali Hotel opened on a bluff 400 feet above the Parks Highway with a capacity of 150 rooms. The closing of the park hotel reduced the number of rooms available by 100. Outside of park borders between Healy and Cantwell nine commercial campgrounds and RV parks provide up to 558 overnight sites. The NPS will have a total of 148 campsites at Riley Creek Campground. Morino CG has 60 walk-in sites. The local area between Healy and Cantwell has or will soon have a total of 766 campsites in 11 campgrounds. Employment in the hotel and

visitor services sector has continued to grow with the addition of the new private facilities. None of the hotels or restaurants in the canyon area near the park entrance remain open during winter, but a few restaurants and overnight accommodations remain open year-round in Healy and Cantwell. The 2000 Census showed a 50% increase in residents of the Healy/McKinley Park census areas since 1990.

Figure 5. Alternative 3 – Existing Conditions

Figure 6. Existing Conditions-Park Hotel Area

IV. ENVIRONMENTAL CONSEQUENCES OF THE ALTERNATIVES

Assumptions for Impact Analysis

This section contains an evaluation of the direct and indirect environmental impacts of the preferred alternative alternative to implement approved plans and the no action alternative. The analysis assumes that the mitigation identified in the *Mitigation and Monitoring* section (pages 12-13) of this environmental assessment would be implemented under any of the action alternatives.

Cumulative impacts were analyzed to add up the incremental impacts to the environment resulting from adding the alternatives to other past, present, and reasonably foreseeable future actions. The cumulative impacts relate primarily to a predicted steady growth in visitation to the park and the implementation of a hazard fuels management plan to reduce vegetation around all park buildings to reduce the chance that wildland fires would endanger park structures. A detailed cumulative impact analysis for implementing alternative 2 (implement existing plans), is found within the DCP/EIS. An EA on the park's hazard fuels management program is expected by late winter of 2002.

The major tour companies and the AKRR will continue marketing their services to Denali and, based on past increases, predict at least a 30 percent increase in rail passengers in the next 20 years. The improvements that the AKRR makes to the depot, waiting shelters, baggage handling and other facilities and services on their exclusive use easement, while not the subject of this EA, are reviewed here for cumulative effects. The circulation and parking improvements on park lands not under the exclusive use easements are reviewed in this EA as part of the alternatives.

It is likely that the AKRR would change the current train schedule between Anchorage and Fairbanks in the next few years, no matter which alternative would be selected. In the short-term, the new train schedule would decrease congestion by reducing the number of passengers arriving and departing at one time. However, the AKRR predicts they will add additional cars to the trains, which would lead to increased number of passengers arriving and departing from the depot daily. This increase in passengers, and expected increases in overall park visitation, could put pressure on park resources and facilities. Regional planning efforts by the NPS have recognized the predicted increase in visitation. The NPS based the DCP/EIS proposed actions on effectively managing park visitation to prevent impacts to park resources while providing visitors with opportunities to enjoy the park.

Alternative 1 - Construct Visitor and Learning Centers near Depot (Preferred Alternative)

<u>Vegetation and Soils</u>
About 13 acres of mixed white spruce and hardwood forest vegetation and soil would be removed or disturbed during the construction of new access roads, visitor facilities, and concessionaire facilities in the entrance area. About 3 acres of former mixed forest would be restored in the vicinity of the park road from the railroad depot to the point it meets the new park road, islands of vegetation around the new VC parking where the hotel and auditorium existed, and parts of the Morino Campground. The net loss of vegetation and soils would be about 9 to 10 acres depending on final

site plans. Because thousands of acres of taiga forest and other vegetation exist in and near the entrance area of the park, the loss of 9-10 acres would be a minor impact.

The NPS would attempt to preserve in its current location a small patch of (rare in the park) lady slipper orchids (*Cyprepedium guttatum)* near the visitor center complex. If the orchid patch would impede site circulation, cause adverse facility design constraints, or nearby construction would threaten the survival of the orchids, then the colony would be carefully transplanted to a suitable location under the oversight of the park plant ecologist.

Cumulative Effects: The total acreage of existing disturbance in the entrance area between park headquarters and the Nenana River is 72 acres and with the preferred alternative the total would increase to about 82 acres. This includes acres of cleared vegetation for the VAC, Riley Creek Campground, Riley Creek Mercantile, water treatment plant, airstrip, railroad depot, park road, Visitor Center complex, and science and learning center complex. No other future projects are anticipated along this part of the road corridor. The incremental impact to vegetation and soils in the entrance area would add about 14 % to the total existing disturbance in the project area. The vegetation removal from this alternative is not expected to have a significant cumulative impact on the thousands of acres of taiga forest or other vegetation resources at the park entrance area.

Conclusion: The removal of trees, shrubs, other vegetation, and the covering of soil on a net 9-10 acres would result in a minor adverse impact to vegetation and soil in the entrance area of the park. This impact would not result in an impairment of park resources that fulfill specific purposes identified in legislation establishing the park or key to the natural or cultural integrity of the park.

Wetlands

About 1.1 acres of low value palustrine scrub-shrub and forested wetlands would be filled or disturbed by the proposed park road realignment in the entrance area. These wetlands were determined by the U.S Army Corps of Engineers to *not* be jurisdictional wetlands requiring a Clean Water Act, Section 404 fill permit (Don Rice, personal communication.). These wetlands are not directly connected to any flowing, navigable waters. Though wetlands provide important wildlife habitat and buffer surrounding areas from flooding, the small area that would be impacted and adequate drainage under the road would reduce these impacts to a minor effect. Furthermore, the NPS would mitigate the overall impacts to wetlands in the park with restoration of a similar acreage of wetlands in the Kantishna Hills of the park. See Appendix B for a complete analysis of wetlands impacts and mitigation for the proposed alternative.

Cumulative Effects: About 3 acres of wetlands have been impacted by previous road, trail, and building construction in the park entrance area. The entrance area of the park between Morino Campground and the Nenana River contains about 25 acres of similar non-jurisdictional wetlands. No foreseeable additional projects are planned for the park entrance area. There are about 9 acres of similar wetlands in the project area (see figures 3 and 6 or figure 6 in the Railroad Depot EA.) This project would further impact 1.1 acres of wetlands in the entrance area for a total displacement of 4.1 acres out of about 25 acres of wetlands in the immediate entrance area, or about 16%. Because the area of wetlands adversely impacted would be small, the relative wetlands value is low, and this area would be mitigated with wetlands restoration in the Kantishna area, there would be no net loss of wetlands or wetlands function in the park.

Conclusion: The destruction of 1.1 acres of palustrine scrub-shrub and forested wetlands for the road re-alignment and expanded depot parking under this alternative and restoration of an equivalent area of wetlands in the Kantishna Hills would result in no net loss of wetlands or wetlands function in the park. This impact would not result in an impairment of park resources that fulfill specific purposes identified in legislation establishing the park or key to the natural or cultural integrity of the park.

Wildlife and Habitat

Wildlife habitat for small mammals, birds, and large mammals would be reduced by a net 9 to 10 acres by entrance area development and the realignment of the park road. This amount of disturbance is similar to that evaluated in the DCP/EIS and the change in the specific sites being disturbed would bring no additional adverse impacts to wildlife habitat. There would be a marginal decrease in impacts to moose calving habitat because the new park road realignment would only disturb higher quality habitat next to an existing road rather than create a new road corridor through the higher quality habitat.

During the construction period noise and human activity would disturb wildlife and cause them to disperse from the affected and adjacent areas. Wildlife would be temporarily displaced by the construction activity. Closing of the Morino Campground area with about 0.5 acre of restoration and vegetative restoration of that part of the park road between the depot and the new access road would create a relatively undisturbed area of wildlife habitat near the Hines Creek corridor. A trail would continue through the Morino Campground area to an overlook for day users, but the level of human use and occupation would be reduced from the present situation. Closing the Morino walk-in CG would reduce the potential for bear-human conflicts over human food in the area. The DSLC dorms would extend the development further along the bluff overlooking Horseshoe Creek than the current employee housing. This area, however, already is near concessioner housing and has other use on a popular trail and along a service road to a well and the electrical pole farm, making the additional human disturbance minor.

About 1.1 acres of palustrine wetlands with willows would be disturbed where the park road realignment would be constructed, which provides higher quality habitat for moose and some migratory birds. Though the proposed project would extend the season of human use into winter, it would also concentrate human activities in the vicinity of the Visitor Center and Science and Learning Center with a probable net negligible effect on wildlife habitat use and behavior.

Cumulative Effects: The total acres of disturbance to wildlife habitat in the entrance area between park headquarters and the Nenana River would be about 82 acres. This includes acres of cleared vegetation for the VAC, Riley Creek Campground, Riley Creek Mercantile, water treatment plant, airstrip, railroad depot, park road, Visitor Center complex, and science center complex. No other future projects are anticipated along this part of the road corridor. The incremental impact to wildlife and habitat in the entrance area would add about 14 % to the total existing disturbed area near the park entrance. Because thousands of acres of similar habitat exist in the vicinity, this alternative is not expected to have a significant cumulative impact on the wildlife and their habitat in the park entrance area.

Conclusion: The net clearing of trees, shrubs, and other vegetation comprising 9 to10 acres of wildlife habitat would result in minor adverse impacts on wildlife and their habitat. The removal of the Morino Campground and the reduction of human occupation near the Hines Creek corridor could have a minor beneficial impact on large wildlife. The impact to wildlife and their habitat would not result in an impairment of park resources that fulfill specific purposes identified in legislation establishing the park or key to the natural or cultural integrity of the park.

Air Quality

Local air quality would be temporarily reduced by the use of heavy machinery during construction activities. Emissions from heating new buildings would be minimal at the VC and Visitor Services Buildings because of passive solar designs to heat interior spaces during summer and closing most of the large buildings during winter. Facilities for bio-fuels and liquefied natural gas installed at a new bus and vehicle fueling station would result in a reduction in air emissions from park buses and vehicles in the entrance area and along the park road. Long-term air quality in the park would benefit slightly from the use of less polluting fuels for park and concession vehicles.

Cumulative Effects: Air quality in Denali National Park's entrance area is affected by emissions from the Healy coal-fired power plants (about 8 miles north), the AKRR diesel engines, bus and vehicular traffic in the entrance area and along the George Parks Highway, and the park power plants and heating units. A park emissions inventory has not yet been conducted, but the temporary incremental increase in emissions from construction equipment and the long-term reduction in emissions from park buses and vehicles from this alternative would be negligible. Nevertheless, a net long-term positive effect is expected from the installation of the new vehicle fuel systems.

Conclusion: This alternative would be consistent with the intent of the air quality goal for Denali to maintain or improve air quality in the park. Though an incremental improvement is expected from a reduction in vehicle emissions from the use of less polluting fuels in park and concessionaire vehicles, the net effect would be small compared to the potential air quality effects from outside sources. These effects would not result in an impairment of park resources that fulfill specific purposes identified in legislation establishing the park nor would they result in a violation of the Clean Air Act requirements.

Water Resources

Water runoff would likely increase temporarily during the use of heavy machinery for construction. Surface water runoff would be controlled, however, by silt fencing and other best management practices during construction under terms of an EPA stormwater permit. It is unlikely that any silt-loading or other pollutant would reach groundwater or surface water bodies. Horseshoe Creek lies about 200 feet north and uphill of most of the proposed new developments and Riley and Hines Creeks lie about 1,500 to 4,000 feet south of the proposed developments, respectively. The vehicle fueling station would be moved closer to Horseshoe Creek, but the topography steers any fuel spills away from the creek.

A greater area covered with hardened parking lots, sidewalks, and buildings would likely lead to an increase in surface water flow from storms and spring melt. Surface runoff from the new road and other areas above the Visitor Center complex would be intercepted with bio-filtration swales.

Surface water runoff from the depot expansion would be dispersed in the forest east of the airstrip and not reach any water channels. Additional private vehicles and buses could lead to more small fuel spills affecting surface water runoff, but it is unlikely that any spills would affect drinking water sources at the Horseshoe Creek intake gallery and the Horseshoe well. Under this alternative, water demands during summer at the Visitor Center and DSLC are expected to be less than past uses at the McKinley Park Hotel complex, but winter demands at the new DSLC would be greater than past winter water uses. The potential for any significant adverse impacts to water resources is negligible.

Cumulative Effects: Surface water runoff and water quality impacts could also result from approved ongoing railroad depot developments. Stormwater control from both of these projects would need to be carefully coordinated, and would be under project agreements with the Alaska Railroad Corporation.

Conclusion: Adverse impacts to surface water from the proposed project, such as siltation or hydrocarbon pollution, would be minor if adequate design and engineering controls are implemented. This impact would not result in an impairment of park resources that fulfill specific purposes identified in legislation establishing the park or violation of requirements under the Clean Water Act.

Cultural Resources

One historical resource site (SI91-1), a pit and can burn in the wooded area southeast of the former hotel, would be buried under the plaza. This site could be located in a vegetative island, thereby avoiding adverse impact. The loss of information and mitigation of impacts would be achieved in consultation with the State Historic Preservation Office (SHPO) and the ACHP pursuant to regulations promulgated under the National Historic Preservation Act (NHPA).

Cumulative Effects: The proposed project could adversely affect only one historical site. Information from the historical site would be retrieved without any significant loss of historic fabric. More significant sites in the entrance area would remain intact and undisturbed

Conclusion: The potential destruction of an old pit and can burn site would not result in an impairment of park cultural resources that fulfill specific purposes identified in legislation establishing the park and effects would be consistent with the mandates of the NHPA.

Visual Resources

The new buildings, parking, and road layout are designed to use areas formerly occupied by the park hotel to the extent reasonable. Vegetative islands and corridors between the plaza and realigned park road would minimize adverse impacts to the local scenery. The Visitor Center would be the largest and tallest new building, and its orientation would enhance visitor appreciation of the surrounding scenery and woodlands. Though groves of vegetation would be interspersed in the plaza between the Visitor Center, Food Court, and Art Gallery, visitors would be afforded views in all directions. Buildings associated with the DSLC would provide views of Mount Healy or Sugarloaf Mountain. All of these buildings would be visible from high points along the upper reaches of the Healy Overlook Trail. The realignment of the park road, over which most park visitors travel to view the interior of the park, would be partially shielded from the new

developments and parking areas with modest vegetation buffers. Moderate temporary visual impacts would occur during construction where new roads are being constructed and new buildings erected, but long-term impacts to visual resources would be minor because new facilities would be constructed mostly where previous hotel facilities existed.

Cumulative Effects: The incremental change in impact from the former hotel facilities would be minimal. The size, distribution, and architecture of the new facilities would blend in better with the environment than the old hotel facilities. Coupled with present facilities and parking in the entrance area (such as the VAC and parking, bus maintenance facilities, employee housing, railroad depot, Riley Creek Campground, and Riley Creek Mercantile), the additional visual impacts of the proposed developments would be minor.

Conclusion: The construction of new structures, parking, and road realignments would contribute moderate short-term and minor long-term impacts to visual resources in the park entrance area. These impacts would not result in an impairment of park scenic resources fulfilling specific purposes identified in legislation establishing the park or key to the natural or cultural integrity of the park.

Visitor Use and Recreation

Recreational opportunities for entrance area visitors would be temporarily affected by the construction of new facilities, the removal of existing facilities and the realignment of the park road. Noise and visual impacts in the entrance area, the closure or relocation of roads and trails, temporary structures and traffic delays would temporarily inconvenience park visitors, tour groups, and tour operations. The Morino walk-in 60-site campground would be closed. This use would be transferred to a renovated loop in the Riley Creek Campground and to recently developed private campgrounds near the park entrance. A new visitor center would be available and convenient for all park visitors, including tour bus visitors and people arriving and departing by train. Visitor safety would be enhanced by providing more separation between buses and pedestrians at the depot and because the majority of visitors would not have to walk across the Denali Park Road between the railroad depot and visitor center complex. An estimated 90% of park visitors would have an opportunity to visit an NPS interpretive or educational facility, which would increase visitor's awareness and knowledge of park resources and values. This alternative would fully satisfy the NPS objective to provide a quality, centralized contact and information exchange location for the NPS and up to 90% of park visitors (NPS 2000b).

The construction of a DSLC campus, complete with dedicated lodging, dining, science and study facilities, would provide for in-depth study and exploration of the park resources and values by individuals and groups visiting the park, including scientists, school groups from all over the state and by those taking college credit classes. The DSLC would be located in a relatively undisturbed natural site rather than the rehabbed hotel site. This would provide a more desirable natural setting for educational programs. Co-location of the VC, DSLC, and AKRR Depot would provide operational and visitor advantages including shared spaces and functions and reduced building sizes. Because new visitor facilities would be located near the railroad depot, more visitors would be likely to spend more time in the entrance area of the park, thereby increasing visitor use in the immediate area. This would satisfy the objective in the DCP/EIS to provide more opportunities for recreation and education in the entrance area.

Cumulative Effects: Additional projects to enhance recreational opportunities in the eastern end of the park are being proposed or are under construction. They would include new walking and skiing trails in the Headquarters area, rehabilitated and new campsites at the Riley Creek Campground, the railroad depot reconfiguration, and completion of the Riley Creek Mercantile. Because of the closure of the Morino Campground and reconfigurations and construction at the Riley Creek Campground, there would be a net loss of 15 campsites. Because of recent additions to campgrounds outside the park between Healy and Cantwell, campers in general have plenty of opportunities to find campsites near the park entrance. The proposed VC, DSLC, and road realignment would complement the other projects. An additional 40-50% of all park visitors would be exposed to NPS interpretive and educational facilities and programs. All of these projects are considered to benefit park visitor experiences and recreational opportunities.

Conclusion: The preferred alternative would enhance visitor services in Denali's entrance area and provide visitors with more accessible, in-depth information and interpretive services heretofore unavailable at the park. Visitor safety would be increased through better education of visitors and co-location of facilities.

Park Management

The proposed expansion of visitor facilities and destinations in the entrance area would create facilities that would likely increase visitor demand and visitation to the park. Also, the facilities would likely help the NPS meet future demands from otherwise expected future increases in visitation.

Park operations such as transportation services, scheduling, staffing, and information gathering and dissemination would be affected in positive ways. The park concessionaire would be able to focus on delivering quality transportation services with reduced lodging and food services at the new DSLC. The concessionaire would operate the VAC for bus reservations, campground reservations, and backcountry permits. All camping facilities in the park's entrance area would be concentrated at the Riley Creek campground rather than split between Riley Creek and Morino campgrounds. NPS employees would have a central location to contact the public. In-depth interpretive programs could be facilitated at the new VC and DSLC, and park research would be better supported at the DSLC. Park managers would likely obtain better and more timely information from a sound science program based at the park. The DSLC would be available during shoulder seasons and winter, whereas no such facility currently exists. The

potential for an estimated 90% of park visitors to make contact with park rangers and interpreters at the VC and DSLC would enable park employees to inform the majority of park visitors of park regulations and policies. Conversely, park employees would learn more from visitors about the resources and experiences they value most. This would enable park managers to adjust programs and policies more readily to meet the demands and expectations of its clients. Furthermore, this alternative would provide much greater flexibility to respond to dynamic visitor trends including increases in visitor numbers, and visitor season length due to the larger developable area and access to winter utilities at the two-site alternative. Additionally, a newly designed visitor center, rather than a modified VAC, better accomplishes park goals for sustainability and visitor contact.

Cumulative Effects: The proposed alternative would complement other projects in the entrance area and provide a recognizable and convenient center for the NPS personnel to greet, inform, and inspire park visitors. This proposal would mesh well with the railroad depot project and improve visitor contact opportunities by NPS personnel. Campground facilities would be concentrated in one location.

Conclusion: The preferred alternative would improve NPS opportunities to inform about 90% of the visiting public about park resources, values, and management policies. Park operations and management would be made more efficient with consolidated campground and visitor services in one general area and interpretive and educational facilities in another location.

Local Communities/Socioeconomic Resources

New visitor facilities and services could benefit the socioeconomic resources of the local businesses and communities. The interpretive and educational facilities would provide services not otherwise available. The DSLC provides up to 100 pillows for overnight participants in research and educational programs, including school groups in dormitory type facilities not available in the local community. DSLC programs would attract participants for specific programs rather than casual walk-in visitors, bringing additional visitors to the area, so direct competition with commercial activities is not expected to occur. Operation of the DSLC nearly year round could stimulate economic activity in the surrounding community, such as increased activity at local restaurants and rental units for staff. A small number of concession employees would have permanent work to operate and maintain the DSLC. Though the Riley Creek Campground would expand from 103 sites to 148 in 2003, the 60-site Morino Campground would be closed for a net loss of 15 campsites. Over half of the new campsites at Riley Creek would be for walk-in campers. The campground changes would have the possible net effect of reducing competition with local businesses. The new food court would mostly appeal to day-users in the park entrance area, and competition with food services outside the park would be minimal. There would be a reduction in in-park gift shop sales due to reduced space for those sales. This would provide additional sales opportunities for local businesses.

Cumulative Effects: Competition with visitor accommodations outside the park boundary would decrease due to the net decrease in the number of pillows and campsites in the park. The park hotel has been closed and wings of the former hotel have been moved, transferring up to 200 pillows to establishments outside of the park. The DSLC would add no more than 100 pillows (including 50 pillows for school children and chaperones in dorms) to the estimated 4,000

pillows in the adjacent communities. There would be a net decrease of 100 pillows in the park entrance area or a 2.5% reduction in pillows inside the park relative to accommodations in adjacent communities. Campground changes would result in a net decrease of 15 sites resulting in a total of 706 campsites (NPS and private) in the entrance area. Of these 706 campsites, the NPS would manage 148 sites or 21% of the total spaces.

Conclusion: The proposed visitor facilities in the entrance area of the park would complement services provided outside the park and likely reduce competition with and stimulate the local economy.

Alternative 2 -- Implement Approved Entrance Plans

Vegetation and Soils

The DCP/EIS authorizes removal or disturbance on about 6.3 acres of mixed white spruce and hardwood forest vegetation and soil that has not already occurred for the construction of new access roads, visitor facilities, and concessionaire facilities in the entrance area. A Value Analysis Study of Visitor Service Facilities in Denali National Park and Preserve (USDI-NPS 2000) indicated the full build-out of the VAC, visitor center and parking, however, would impact 8.8 acres instead of 5.0 acres as indicated for the same facilities in the DCP. Remaining from the VTS EA, construction of the managers' quarters and the employees' dining facility would use about 0.2 acres of undisturbed ground. The Depot EA estimates a new surface disturbance of about 3.0 acres for the proposed new depot, road segments, parking lots, and road realignment. Under the approved plans about 1.8 acres of area would be restored, primarily abandoned sections of road. The total area of disturbance under these plans would be between 8.2 and 12 acres with about 1.8 acres restored or landscaped. The net loss of vegetation and soils would be between 6.4 and 10.2 acres, depending on the final designs. The vegetation removal from this alternative would not have a significant impact on the thousands of acres of taiga forest and other vegetation resources near the park entrance area.

Cumulative Effects: Commercial and private development as well as the growth of transportation systems in and near the Denali frontcountry have resulted and would continue to result in the loss of several hundred acres of spruce forest, especially in the Nenana River corridor outside the park boundary. Additional commercial and private development along the Nenana River corridor is expected to result in the disturbance of hundreds of acres of vegetation and soils during the foreseeable future. Minor loss of and disturbance to vegetation and soil in the park entrance area and along the park road corridor has occurred because of previous development, primarily visitor facilities and construction and maintenance of roads and trails. The total acres of disturbance in the park development zone between the Nenana River and Morino Campground is about 72 acres. This includes acres of cleared vegetation for the George Parks Highway, Denali Park Road, VAC, Riley Creek Campground, Riley Creek Mercantile, sewer treatment plant, airstrip, railroad depot, Morino Campground, bus maintenance facilities, concession housing, hotel complex, and area trails. The incremental impact to vegetation and soils in the entrance area from implementation of existing plans would be between 11% to 17% of the total disturbance in the park entrance area. With restoration of about two acres, the net incremental impacts of this alternative would be 9 to 14% of the total ground disturbance. These incremental impacts would not result in significant cumulative impacts on vegetation and soils.

Conclusion: The clearing of trees, shrubs, other vegetation, and the disturbance to soil on 8-12 acres and the restoration and landscaping of two acres would result in a limited adverse impact to vegetation and soil. This impact would not result in an impairment of park resources that fulfill specific purposes identified in legislation establishing the park or key to the natural or cultural integrity of the park.

Wetlands

About 1.1 acres of low value palustrine scrub-shrub and forest wetlands would be filled or disturbed by the proposed park road realignment and expanded depot parking in the entrance area. These wetlands were determined by the U.S Army Corps of Engineers to *not* be jurisdictional wetlands requiring a Clean Water Act, Section 404 fill permit because these wetlands are not connected to any flowing, navigable waters of the USA (Don Rice, personal communication). Though wetlands provide important wildlife habitat and buffer surrounding areas from flooding, the small area that would be impacted and adequate drainage under the road realignment would reduce these impacts to a minor effect. Furthermore, the NPS would mitigate the overall impacts to wetlands in the park with restoration of a similar acreage of wetlands in the Kantishna Hills of the park.

Cumulative Effects: About 3 acres of wetlands have been impacted by previous road, trail, and building construction in the park entrance area. The entrance area of the park between Morino Campground and the Nenana River contains about 25 acres of similar non-jurisdictional wetlands. No foreseeable additional projects are planned for the park entrance area. There are about 9 acres of similar wetlands in the project area (see figures 3 and 6 or figure 6 in the Depot EA.) This project would further impact 1.1 acres of wetlands in the entrance area for a total displacement of 4.1 acres out of about 25 acres of wetlands in the immediate entrance area, or about 16%. Because the area of wetlands adversely impacted would be small, the relative wetlands value is low, and this area would be mitigated with wetlands restoration in the Kantishna area, there would be no net loss of wetlands or wetlands function in the park.

Conclusion: The clearing of 1.1 acres of palustrine scrub-shrub and forested wetlands for the road re-alignment and expanded depot parking under this alternative and restoration of an equivalent area of wetlands in the Kantishna Hills would result in no net loss of wetlands or wetlands function in the park. This impact would not result in an impairment of park resources that fulfill specific purposes identified in legislation establishing the park or key to the natural or cultural integrity of the park.

Wildlife and Habitat

Wildlife habitat for large mammals, small mammals, and birds would be reduced by a net 6 to 11 acres for entrance area development and the realignment of the park road. During the construction period noise and human activity would disturb wildlife and cause them to disperse from the affected and adjacent areas. About 1.1 acres of shrub palustrine wetlands, which provide higher quality habitat for moose and some migratory birds, would be disturbed for park road realignment and railroad depot parking expansion. A small area of important moose calving habitat would be disturbed for the road realignment, but the bulk of the primary moose calving habitat in the entrance area would not be affected under this alternative.

Cumulative Effects: The total net acres of disturbance to wildlife habitat in the entrance area between the Nenana River and Morino Campground would be about 82 to 86 acres. This estimate includes acres of cleared vegetation for the George Parks Highway, the Denali Park Road, the Visitor Center and Visitor Services facilities, Riley Creek Campground, Riley Creek Mercantile, wastewater treatment lagoons, McKinley Park Airstrip, railroad depot, the Denali Park Post Office, and DSLC located at the old hotel site. The net incremental impact to wildlife and habitat in the entrance area under this alternative would be about 9 to 15 % of the total disturbed area near the park entrance. In the nearby vicinity, hundreds of acres of disturbed natural habitat already exist and new disturbance is projected for the future along the George Parks Highway, the AKRR, and commercial and private developments in the Nenana River corridor, McKinley Village, and Healy. Because tens of thousands of acres of similar habitat exist in the vicinity and the overall footprint of human disturbance to wildlife may be only slightly increased, this alternative is not expected to have a significant cumulative impact on wildlife and their habitat in the park entrance area.

Conclusion: The net loss of trees, shrubs and other vegetation comprising 6 to 11 acres of wildlife habitat would result in a limited adverse impact to wildlife and their habitat. The impact to wildlife and their habitat would not result in an impairment of park resources that fulfill specific purposes identified in legislation establishing the park or key to the natural or cultural integrity of the park.

Air Quality

Local air quality would be temporarily reduced by the use of heavy machinery during construction activities. Emissions from heating new buildings would be minimal at the VC and Visitor Services Buildings because of passive solar designs to heat interior spaces during summer and closing most of the large buildings during winter. Adaptive use of hotel buildings for the DSLC would result in a small increase in emissions during the winter.

Cumulative Effects: Air quality in Denali's entrance area is affected by emissions from the Healy coal-fired power plant (about 12 miles north), bus and vehicular traffic in the entrance area and along the George Parks Highway, the AKRR diesel engines, and the park boiler plant and individual heating units. A park emissions inventory has not yet been conducted, but the temporary incremental increase in emissions from construction equipment and the long-term increase from the operation of new facilities would be negligible from this alternative.

Conclusion: This alternative would be consistent with the intent of the air quality goal for Denali to maintain or improve air quality in the park. Though incremental degradation is expected from construction and operation of additional facilities, the net effect would be small compared to the potential air quality effects from outside sources. These effects would not result in an impairment of park resources that fulfill specific purposes identified in legislation establishing the park nor would they result in a violation of the Clean Air Act requirements.

Water Resources

Water runoff would likely increase temporarily during the use of heavy construction machinery. Surface water runoff would be controlled, however, by silt fencing and other best management practices during construction and under conditions of an EPA stormwater permit. It is unlikely that any silt-loading or other pollutant would reach groundwater or surface water bodies.

A greater area covered with hardened parking lots, sidewalk, and buildings would likely lead to an increase in surface water flow from storms and spring melt. Surface runoff from the VAC area would be slowed and dispersed by the forest and north of the lagoons. Surface water runoff from the depot expansion would be dispersed in the forest east of the airstrip and not reach any water channels. Additional private vehicles and buses could lead to more small fuel spills affecting surface water runoff, but it is unlikely that any spills would affect drinking water sources at the Horseshoe Creek intake gallery and the Horseshoe well. Under this alternative, water demands during summer at the Visitor Center and DSLC are expected to be less than past uses at the McKinley Park Hotel complex, but winter demands at the new DSLC would be greater than past winter water uses. The potential for adverse impacts to water resources is negligible to minor.

Cumulative Effects: Surface water runoff and water quality impacts could also result from approved ongoing railroad depot developments. Stormwater control from both of these projects would need to be carefully coordinated, and would be under project agreements.

Conclusion: Negligible to minor adverse impacts to surface water from the proposed project are likely if adequate design and engineering controls are implemented. This impact would not result in an impairment of park resources that fulfill specific purposes identified in legislation establishing the park or violation of requirements under the Clean Water Act.

Cultural Resources

One historical resource site (SI91-1), a pit and can burn in the wooded area southeast of the former hotel, would be buried by the road realignment as approved in the railroad EA. The site would be documented in consultation with the State Historic Preservation Officer before the information is lost to construction pursuant to regulations promulgated under the National Historic Preservation Act (NHPA).

Cumulative Effects: The proposed project would adversely affect only one historical site out of 25 known sites in the park entrance area. Information from the historical site could be retrieved without any significant loss of historic fabric. More significant sites in the entrance area would remain intact and undisturbed

Conclusion: The loss of an old site would not result in an impairment of park cultural resources that fulfill specific purposes identified in legislation establishing the park and effects would be consistent with the mandates of the NHPA.

Visual Resources

The new visitor services facilities and parking lots between the old VAC and the wastewater lagoons would be the largest development under this alternative, and they would lie on a wooded bench with buffers of vegetation shielding it from the Denali Park Road and from the George Parks Highway. The re-routed park road near the depot would be screened from other development. A new science and learning center would occupy structures at the former McKinley Park Hotel and would not add to or detract appreciably from the existing visual conditions. A new managers quarters and employee dining facility would not be visible from the park road and would blend into

the existing concessionaire's facility area. New structures and parking at the railroad depot would occur near existing developments.

The new structures would be visible from high points in the entrance area such as the Healy Overlook Trail, and would likely be of the magnitude of the current VAC.

Cumulative Effects: The incremental change in impacts from the former entrance area facilities would be minimal. Coupled with existing facilities and parking in the entrance area (such as the VAC and parking, bus maintenance facilities, concession employee housing, railroad depot, Riley Creek Campground, Riley Creek Mercantile, Denali Park Post office, and Morino Campground), the additional visual impacts of the proposed developments in the park entrance area would be minimal. Recent developments in the Nenana River Canyon and at McKinley Village have increased the density and visibility of human-caused visual impacts in the vicinity of the park entrance. The incremental visual impacts from this alternative would be comparable to the proposed action.

Conclusion: The impacts to the visual quality and scenic integrity of the park entrance area would not result in an impairment of park resources fulfilling specific purposes identified in legislation establishing the park or key to the natural or cultural integrity of the park.

Visitor Use and Recreation

The construction of new visitor services facilities in conjunction with a visitor center would be attractive for all park visitors, but package tour visitors arriving and departing by train may not have a convenient time in their schedules to make a visit to the new visitor complex. This new visitor center would be utilized by an estimated 40-50 % of park visitors. While this alternative would provide a quality visitor center destination for contact and information exchange, it would not fully satisfy the NPS objective to engage the majority of park visitors in those programs.

The use of former hotel buildings to start a DSLC campus would provide in-depth extended programs. Neither the site nor the existing facilities, however, would fully satisfy the program needs for housing, sustainable facilities, or appropriately sized structures. For instance, the 299-seat auditorium would be too large for DSLC groups of 50 people.

The construction of new facilities, removal of existing facilities and the realignment of the park road would enhance recreational opportunities for entrance area visitors. Noise and visual impacts in the entrance area, the closure or relocation of roads and trails, temporary structures and traffic delays would temporarily inconvenience park visitors, tour groups, and tour operations. Because some heavy construction would be scheduled to occur during periods of low visitor use, from September to May, these impacts are considered minor to moderate. Some of the new facilities would be constructed adjacent to the existing VAC while the VAC is in use. It is expected that most visitors would recognize that the inconveniences or delays would be temporary and that they would not significantly detract from their main park experience. This alternative would have a greater impact on visitor use during the summer construction period than the preferred alternative because this alternative does not allow ongoing operations to be located outside of the construction zone.

Cumulative Effects: Additional projects to enhance recreational opportunities in the eastern end of the park are being proposed or are under construction. They would include new walking and skiing trails in the Headquarters area, rehabilitated and new campsites at the Riley Creek Campground, the railroad depot reconfiguration, relocation of the Denali Park Post Office, and completion of the Riley Creek Mercantile and RV dump station. The proposed Visitor Center and visitor services facilities, Denali Science and Learning Center, and road realignment would complement existing facilities. All of these facilities are considered to benefit park visitor experiences and recreational opportunities.

Conclusion: This alternative would enhance visitor services in Denali's entrance area and provide about half of the visitors with more accessible, in-depth information and interpretive services heretofore unavailable at the park. It would not address the opportunities to provide in-depth information and programs for those visitors using the railroad for transportation to and from the park.

Park Management

The proposed expansion of visitor facilities and destinations in the entrance area would likely help the NPS meet demands from expected future increase in visitation. The new facilities could also potentially entice visitors to spend more time in the park entrance area.

Park operations such as transportation services and other visitor logistics, personnel scheduling and staffing, and information gathering and dissemination would be affected in a positive way. The park concessionaire would be able to focus on delivering quality visitor logistics and reservation services in facilities designed for those functions. NPS employees meeting the public would have a central location to contact the public. In-depth interpretive programs at the new VC would be available to all visitors, but visitors with tight schedules like those on packaged tours may not have time to visit these facilities. Sharing of park research would be better supported at the DSLC. The DSLC would be available during shoulder seasons, but the water and wastewater systems would not be functional in winter. This alternative would allow an estimated 40% to 50% of park visitors to make contact with park rangers and interpreters at the VC and DSLC. This would not be a significant numerical increase in visitor contact over the present conditions, but the DSLC programs could significantly increase understanding of park resource values by a small number of visitors.

Cumulative Effects: This alternative would complement other projects in the entrance area and provide a recognizable and convenient center for the NPS personnel to greet, inform, and inspire park visitors. This proposal would not mesh well with the railroad depot project, and would modestly improve visitor contact opportunities by NPS personnel.

Conclusion: Operational efficiency would be improved with this alternative because of new, adequate facilities and more effective location of entrance area management and support functions. This alternative would enhance the opportunities for sharing information and interpretation of resource values to visitors.

Local Communities/Socioeconomic Resources

New visitor facilities including a visitor center and science and learning center could positively affect the socioeconomic resources of the local businesses and communities. These facilities would not directly compete with visitor services outside the park boundary because no hotel would be located inside the park entrance area and they would provide services not otherwise available. About 50 pillows would be available for DSLC participants. DSLC programs would not be available to casual walk-in visitors, so direct competition with commercial activities would not occur. Operation of the DSLC during shoulder seasons, however, could stimulate a small amount of economic activity in the surrounding community, such as increased activity at local restaurants and lodging units for staff. A small number of concession employees would have permanent work to operate and maintain the DSLC. Under the approved plans the NPS would maintain a total of 208 campsites in the entrance area, compared to a total of 558 commercial sites outside the park.

Cumulative Effects: The DSLC would add no more than 50 pillows to the estimated 4,000 pillows in the surrounding communities. This proposed increase in dormitory beds would be significantly less than the 200 pillows recently eliminated with the Park Hotel closing. The net effect would be a reduction of 150 pillows in the park entrance area or a 3.75% reduction compared to the 4,000 pillows available in adjacent communities. Of the 766 campsites available between Cantwell, Healy, and Entrance Area, the NPS would manage 208 sites or 27% of the total spaces. This alternative would provide slightly more competition with private campgrounds than the preferred alternative.

Conclusion: The proposed visitor facilities in the entrance area of the park would complement services provided outside the park and provide a minor stimulus to the local economy. This alternative would provide slightly fewer pillows in the entrance area of the park but more NPS campsites than the preferred alternative. The DSLC facility would not be comparable or competitive with outside accommodations, but this alternative would provide slightly more competition with private campgrounds than the preferred alternative.

Alternative 3 – Existing Conditions (No Action)

Vegetation and Soils

No mixed white spruce and hardwood forest vegetation would be removed or disturbed to preserve the status quo. About 0.5 acre of soils and vegetation in this area would be restored where the lodging units of the hotel were removed in the fall of 2001.

Wildlife and Habitat

The habitat area for small mammals, birds, and moose would be increased by about 0.5 acre from reclamation at the hotel site. Use of native seed for restoring vegetation would likely favor small mammals and moose.

Continued visitor and employee use of the VAC, depot, auditorium, bus maintenance facilities, employee housing, and campgrounds would result in continued local avoidance of the area by moose, lynx, bears and other wary animals. The loss of the lodging and dining functions of the hotel would reduce this disturbance by a limited amount.

Wetlands
No wetlands would be filled or disturbed under this alternative.

Air Quality
Air quality would not be affected by this alternative.

Water Quality
Water quality would be improved a negligible amount with the restoration of 0.5 acre of vegetation by filtering and slowing surface runoff.

Cultural Resources
No known cultural resources would be affected with the status quo.

Visitor Use and Recreation
Visitor information and interpretive facilities in the entrance area would remain limited in summer to the auditorium, VAC information desk, bulletin boards, guided hikes, and campground programs. Visitors would be disappointed at the lack of a traditional visitor center for in-depth information and programs.

School groups, Elderhostel-type groups, and other groups would not have an in-park destination for an extended learning center. Visitors would miss a significant opportunity for immersion in a resource-based learning environment. Opportunities to do research on park resources and to learn in-depth about research on park resources would be missed due to the lack of science center.

In winter there would be no visitor information or interpretive facilities other than at park headquarters.

Visual Resources
The 0.5 acre restored area at the hotel site would result in an improvement in visual quality, but an assortment of remaining non-functioning structures would detract from that gain.

Park Management
Park interpretive personnel would continue to disseminate public information and interpretive programs at scattered locations in the entrance area. This would limit the park's ability to provide a cohesive and complete interpretive presentation to the visitors. Half to two thirds of park visitors would continue to arrive via the Alaska Railroad, stay at hotels outside the park, and visit the park on tour buses. This results in limited opportunities for park personnel to provide in-depth information and interpretive programs to these visitors and would fail to meet park goals for improved visitor information and education.

Local Communities/Socioeconomic Resources
This alternative would have little or no effect on the social and economic resources in the area. Former hotel lodging modules have been moved to locations outside the park boundaries, and these accommodations would be opened before next summer season. There would be no net loss or gain in visitor accommodations near the entrance to the park. Privately operated accommodations outside

the park would be equally competitive for the summer of 2002 because no operator could claim "higher" status of having a hotel inside the park. Of the 766 campsites available between Cantwell, Healy, and Entrance Area, the NPS would manage 208 sites or 27% of the total spaces. This alternative would continue slightly more competition with private campgrounds than the preferred alternative.

Cumulative Effects: The impacts of this alternative to natural and cultural resources such as vegetation and wildlife habitat would be minimal to non-existent and there would not be a contribution to any impacts from other local or regional projects.

Conclusion: This alternative would result in continuance of the status quo in the entrance area, without the lodging and dining functions at the old hotel site. Visitor opportunities to attend in-depth interpretive and educational programs would remain limited and inconvenient, especially for visitors on a tight schedule. Park management and concession operations would be limited to the existing informational and ticketing center, auditorium, campgrounds, bus maintenance facilities, and existing concession employee accommodations.

In summary, this alternative would not impair park resources, but it also would not achieve the objectives to provide a high percentage of park visitors with opportunities for resource-based experiences in the entrance area of Denali as well as to establish a quality science and learning center for those visitors participating in extended educational programs. In addition, this alternative would not improve vehicle and pedestrian circulation for visitors traveling to and from the railroad depot. This alternative also would not evaluate the development required under the new principal park concession contract.

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SELECTED REFERENCES

Cowardin, Lewis M., Virginia Carter, Francis C. Golet, and Edward T. LaRoe
1979. Classification of Wetlands and Deepwater Habitats of the United States. For the U.S. Department of the Interior, Fish and Wildlife Service, Office of Biological Services, FWS/OBS-79/31.

U.S. Department of the Interior, National Park Service (NPS)
1986. General Management Plan, Land Protection Plan, Wilderness Suitability Review, Denali National Park and Preserve, Alaska. Denver Service Center, NPS D-96-A.

1988. Final Environmental Impact Statement, Wilderness Recommendation, Denali National Park and Preserve, Alaska. Denver Service Center, NPS D-114A.

1996. Draft Development Concept Plan/Environmental Impact Statement, Entrance Area and Road Corridor, Denali National Park, Alaska. NPS Denver Service Center, NPS D-244.

1996. Final Development Concept Plan/Environmental Impact Statement, Entrance Area and Road Corridor, Denali National Park, Alaska. NPS Denver Service Center, NPS D-244A.

1999. Environmental Assessment, Proposed Expansion of the Alaska Railroad Depot, Denali National Park and Preserve, Alaska

2000a. Management Policies 2001, USDOI, NPS, NPS D1416.

2000b. Value Analysis Study, Visitor Services Facilities, Package 170, Denali National Park and Preserve, with NPS contract consultant Rim Architects.

2001. Memorandum of Understanding between the U.S.D.I. National Park Service Denali National Park and Preserve and Alaska Railroad Corporation.

APPENDIX A
SUBSISTENCE - SECTION 810(a) OF ANILCA
SUMMARY EVALUATION AND FINDINGS

I. INTRODUCTION

This section was prepared to comply with Title VIII, Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA). It summarizes the evaluation of potential restrictions to subsistence activities that could result from the construction of visitor services and realignment of the park road in the entrance area of Denali National Park and Preserve.

II. THE EVALUATION PROCESS

Section 810(a) of ANILCA states:

> "In determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands . . . the head of the federal agency . . . over such lands . . . shall evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes. No such withdrawal, reservation, lease, permit, or other use, occupancy or disposition of such lands which would significantly restrict subsistence uses shall be effected until the head of such Federal agency -
>
> (1) gives notice to the appropriate State agency and the appropriate local committees and regional councils established pursuant to section 805;
>
> (2) gives notice of, and holds, a hearing in the vicinity of the area involved; and
>
> (3) determines that (A) such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands, (B) the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and (C) reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions."

ANILCA created new units and additions to existing units of the National Park System in Alaska. Denali National Park and Preserve was created by ANILCA Section 202(3)(a):

> "The park additions and preserve shall be managed for the following purposes, among others: To protect and interpret the entire mountain massif, and additional scenic mountain peaks and formations; and to protect habitat for, and populations of, fish and wildlife, including, but not limited to, brown/grizzly bears, moose, caribou, Dall sheep, wolves, swans and other waterfowl; and to provide continued opportunities, including reasonable access, for mountain climbing, mountaineering, and other wilderness recreational activities."

Title I of ANILCA established national parks for the following purposes:

> ". . . to preserve unrivaled scenic and geological values associated with natural landscapes; to provide for the maintenance of sound populations of, and habitat for, wildlife species of inestimable value to the citizens of Alaska and the Nation, including those species dependent on vast relatively undeveloped areas; to preserve in their natural state extensive unaltered arctic tundra, boreal forest, and coastal rainforest ecosystems to protect the resources related to subsistence needs; to protect and preserve historic and archeological sites, rivers, and lands, and to preserve wilderness resource values and related recreational opportunities including but not limited to hiking, canoeing, fishing, and sport hunting, within large arctic and subarctic wildlands and on free-flowing rivers; and to maintain opportunities for scientific research and undisturbed ecosystems.
>
> ". . . consistent with management of fish and wildlife in accordance with recognized scientific principles and the purposes for which each conservation system unit is established, designated, or expanded by or pursuant to this Act, to provide the opportunity for rural residents engaged in a subsistence way of life to continue to do so."

The potential for significant restriction must be evaluated for the proposed action's effect upon ". . . subsistence uses and needs, the availability of other lands for the purposes sought to be achieved and other alternatives which would reduce or eliminate the use. . . ." (Section 810(a))

III. PROPOSED ACTION ON FEDERAL LANDS

Alternatives 1, 2 and 3 are described in detail in the environmental assessment. Customary and traditional subsistence use on NPS lands will continue as authorized by federal law under all alternatives. Federal regulations implement a subsistence priority for rural residents of Alaska under Title VIII of ANILCA.

The NPS and Alaska Railroad Corporation have proposed to enlarge the existing Alaska Railroad Depot facilities within Denali National Park and Preserve and to re-align the park road around a proposed visitor center site. The site is in the former Mount McKinley National Park wherein subsistence activities are not allowed.

IV. AFFECTED ENVIRONMENT

Subsistence uses within Denali National Park and Preserve are permitted in accordance with Titles II and VIII of ANILCA. Section 202(3)(a) of ANILCA authorizes subsistence uses, where traditional, in the northwestern and southwestern preserves of Denali National Preserve. Lands within former Mount McKinley National Park are closed to subsistence uses.

A regional population of approximately 300 eligible local rural residents qualifies for subsistence use of park resources. Resident zone communities for Denali National Park and Preserve are

Cantwell, Minchumina, Nikolai, and Telida. By virtue of their residence, local rural residents of these communities are eligible to pursue subsistence activities in the new park additions. Local rural residents who do not live in the designated resident zone communities, but who have customarily and traditionally engaged in subsistence activities within the park additions, may continue to do so pursuant to a subsistence permit issued by the Park Superintendent in accordance with state law and regulations.

The NPS realizes that Denali National Park and Preserve may be especially important to certain communities and households in the area for subsistence purposes. The resident zone communities of Minchumina (population 22) and Telida (population 11) use park and preserve lands for trapping and occasional moose hunting along area rivers. Nikolai (population 122) is a growing community and has used park resources in the past. Cantwell (population 147) is the largest resident zone community for Denali National Park and Preserve, and local residents hunt moose and caribou, trap, and harvest firewood and other subsistence resources in the new park area.

The main subsistence species, by edible weight, are moose, caribou, furbearers, and fish. Varieties of subsistence fish include coho, king, pink and sockeye salmon. Burbot, dolly varden, grayling, lake trout, northern pike, rainbow trout and whitefish are also among the variety of fish used by local people. Beaver, coyote, land otter, weasel, lynx, marten, mink, muskrat, red fox, wolf and wolverine are important furbearer resources. Rock and willow ptarmigan, grouse, ducks and geese complete the park/preserve subsistence small game list.

The NPS recognizes that patterns of subsistence use vary from time to time and from place to place depending on the availability of wildlife and other renewable natural resources. A subsistence harvest in any given year many vary considerably from previous years because of such factors as weather, migration patterns and natural population cycles. However, the pattern is assumed to be generally applicable to harvests in recent years with variations of reasonable magnitude.

V. SUBSISTENCE USES AND NEEDS EVALUATION

To determine the potential impact on existing subsistence activities, three evaluation criteria were analyzed relative to existing subsistence resources that could be impacted.

The evaluation criteria are:

- the potential to reduce important subsistence fish and wildlife populations by (a) reductions in numbers; (b) redistribution of subsistence resources; or (c) habitat losses;
- the affect the action might have on subsistence fishing or hunting access; and
- the potential to increase fishing or hunting competition for subsistence resources.

The potential to reduce populations:

Land use activities could have temporary and/or long-term impacts on wildlife habitat, depending on the nature and extent of the disturbance.

The alternatives would not adversely affect the distribution or migration patterns of subsistence resources. Therefore, no change in the availability of subsistence resources is anticipated as a result of the implementation of this proposed action.

Restriction of Access:

All rights of access for subsistence harvests on NPS lands are granted by Section 811 of ANILCA. Denali National Park and Preserve is managed according to legislative mandates, NPS management policies and the park's General Management Plan. No actions under the alternatives described in the environmental assessment should affect the access of subsistence users to natural resources in the park and preserve.

Increase in Competition:

The alternatives should not produce any increase in competition for resources to subsistence users.

If, and when, it is necessary to restrict taking, subsistence uses are the priority consumptive users on public lands of Alaska and will be given preference on such lands over other consumptive uses (ANILCA, Section 802(2)).

Continued implementation of provisions of ANILCA should mitigate any increased competition, however significant, from resource users other than subsistence users. Therefore, the proposed action would not adversely affect resource competition.

VI. AVAILABILITY OF OTHER LANDS

Choosing a different alternative would not decrease the impacts to park resources for subsistence.

VII. ALTERNATIVES CONSIDERED

The alternatives considered for this project were limited to the existing park complex and lands in the entrance area to the park. The alternatives are: 1) implement a plan to construct a visitor center and research and education center (Denali Science and Learning Center) in and near the area formerly occupied by the McKinley Park Hotel and realign the Denali Park Road between the existing bus maintenance facility and the proposed visitor center complex; 2) implement existing plans in the park's 1996 front country EIS and 1999 Railroad Depot EA to establish a visitor center in the present Visitor Access Center, move the logistics functions into new buildings near that same site, and realign the park road near the depot to allow for expanded parking and circulation at the depot; and 3) continue the existing conditions (No Action) which include no visitor center, no in-park extended learning center/campus and continued congestion and safety hazards in the parking and circulation areas at the Denali Park depot. See the EA for more detailed descriptions of the alternatives.

VIII. FINDINGS

This analysis concludes that the preferred alternative would not result in a significant restriction of subsistence uses.

APPENDIX B
Statement of Findings for
Executive Order 11990 “Protection of Wetlands”

Statement of Findings for Executive Order 11990
(Protection of Wetlands)
Construction of New Visitor Facilities in the Entrance Area
Denali National Park and Preserve, Alaska

December 2001

Recommended:
Superintendent, Denali National Park and Preserve Date

Certified For Technical Accuracy and Servicewide Consistency:
Chief, Water Resources Division, Washington Office Date

Approved:
Regional Director, Alaska Region Date

PURPOSE AND NEED FOR ACTION

The National Park Service (NPS) has prepared and made available for public review an environmental assessment (EA) to evaluate the impacts of construction of new visitor services in the entrance area in Denali National Park and Preserve.

The approved 1996 Entrance Area and Road Corridor Development Concept Plan for Denali National Park and Preserve identified the need for the expansion of visitor services in the park entrance area. The current facilities do not provide a fully operational visitor center, environmental education center, meet current or future visitor needs, or address parking problems, traffic congestion, and safety hazards near the railroad depot.

The NPS and the Alaska Railroad (AKRR) are working cooperatively to improve the layout of the Alaska Railroad Depot in Denali National Park and Preserve. In addition, the NPS proposes to construct a visitor center with an efficient linkage to the depot in order to provide a park interpretive destination that would fit into the tight schedule of the package tour visitors being driven to their departing train. The NPS and AKRR propose to enlarge the existing facilities and parking lots, construct a new vehicular corridor into the depot area, and move the park road to the west of the former hotel site to provide room for the visitor center/depot complex. (see figures 2 and 3 of EA).

Executive Order 11990 (Protection of Wetlands) requires the NPS, and other federal agencies, to evaluate the likely impacts of actions in wetlands. The executive order requires that short and long-term adverse impacts associated with occupancy, modification or destruction of wetlands be avoided whenever possible. Indirect support of development and new construction in such areas should also be avoided wherever there is a practicable alternative.

To comply with these orders, the NPS has developed a set of agency policies and procedures which can be found in Director's Order 77-1: Wetland Protection, and Procedural Manual 77-1: Wetland Protection. The policies and procedures related to wetlands emphasize: exploring all practical alternatives to building on, or otherwise affecting, wetlands; reducing impacts to wetlands whenever possible; and providing direct compensation for any unavoidable wetland impact by restoring degraded or destroyed wetlands on other NPS properties.

The purpose of this Statement of Findings (SOF) is to present the NPS rationale for its proposed plan to construct portions of the railroad depot expansion and park road in the wetland area. This SOF also documents the anticipated effects on these resources.

WETLANDS WITHIN THE PROJECT AREA

Wetland boundaries were identified in the field with flagging by NPS personnel and later surveyed by contractors to determine wetland acreage. The U.S. Army Corps of Engineers (USACE) visited the project site in July 1999 and agreed with the wetlands delineation within the project area. Of the 13.1 acres affected by the proposed action, 1.1 acres (49,000 square feet) were classified as wetlands (figure 3 of EA) under the "Classification of Wetlands and Deepwater Habitats of the United States", the Cowardin Classification System (Cowardin et al. 1979), and are therefore subject to NPS wetlands compliance procedures.

The wetlands located within the proposed project area consist of wet scrub-shrub and forested wetlands. The core area of wetlands is classified as Palustrine Scrub-Shrub, Broad-leaved Deciduous, Seasonally Flooded wetlands (PSS1B). The areas surrounding these core wetlands are classified as Palustrine Forested, Needle-leaved Evergreen, Seasonally-Flooded wetlands (PF04B). These wetlands provide habitat for small mammals, such as red squirrels, snowshoe hares, and porcupine; bird species, including gray jays, robins, thrushes, sparrows, and warblers. Moose frequent the area for forage, and it is considered potential moose calving area.
The major plant species on the wetland sites include black spruce, spruce hybrids, quaking aspen, willow, and alder. Common ground cover includes mosses, horsetails, and a variety of annual flowering plants. This wetland type is common throughout the eastern areas of Denali National Park and Preserve. The park has determined that the potential wetlands located at the project site are locally common and have limited environmental significance for the area, in terms of surface water quality or animal habitat.

THE PROPOSAL IN RELATION TO WETLANDS

The proposal and alternatives are described in detail in the project EA.

The construction of a new segment of park road and expansion of the Alaska Railroad Depot parking will impact a maximum of 1.1 acres of wetlands. The extent of disturbance is shown on the attached project plan.

To provide a stable subgrade on which to build the road, all wetland soil within the road prism and parking lots will be excavated to bedrock or suitable subgrade material with adequate bearing capacity. Wetland soil will be replaced with clean fill and compacted, and crushed aggregate will be placed on top of the subgrade.

Discharge of dredged or fill material into jurisdictional wetlands is regulated by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act. According to a recent determination by Corps personnel, the project would not affect wetlands under the jurisdiction of the Corps (Don Rice, pers. comm.)

MITIGATION PROPOSED

Federal and NPS Policy is to avoid siting projects in wetlands whenever possible. If circumstances make it impracticable to avoid wetlands, then mitigation of unavoidable impacts must be planned. A NPS wetlands “no-net-loss” policy requires that wetland losses be compensated for by restoration of wetlands, preferably of comparable wetland type and function and in the same watershed (if possible).

Of the13.1 acres affected by the proposed action, 1.1 acres are classified as wetlands. This statement of findings commits to full 1:1 compensation for the disturbed wetlands acreage.

On-Site Rehabilitation

As much as possible, disturbance of wetlands in and around the project area would be avoided. Any areas disturbed by construction activities would be restored to as near natural conditions as possible. Prior to the start of construction activities, the NPS would salvage as much topsoil, organic matter, and vegetation, as feasible, for later use in site revegetation. Salvaged material

would be stockpiled separately and would be returned to the disturbed areas following construction.

Approximately 3.5 acres of disturbed lands will be revegetated with native plants after the completion of the construction activities. The Denali National Park and Preserve's Resource Preservation and Research Division would perform all revegetation activities.

Off-Site Compensation (Wetland Restoration)

Compensation, by restoration of previously disturbed degraded wetlands, is required under the NPS no-net-loss policy for projects involving disturbance or loss of wetlands. Compensate will occur for the loss of 1.1 acres of palustrine wetland. One-for-one compensation will be completed elsewhere in the park by restoring a riverine and palustrine wetland in the Kantishna Hills region of the park (Figure 7). It is anticipated that the wetland functions and values lost at the project site will be balanced by those functions and values regained at a restored former placer mine site.

One acre within the park's Caribou Creek claims has been selected for restoration within the scope of this mitigation. These wetlands are classified as Riverine Upper Perennial Unconsolidated Shore with Intermittent Flooding (R3USJ), and Palustrine Unconsolidated Shore Cobble Gravel Seasonally Flooded/Well-Drained (PUS1D). Restoration plans include removing and disposing of debris; stabilizing the channel and floodplain; stabilizing the access road; and revegetating the stripped areas. Preliminary work includes water and soil sampling, and engineering surveys of the existing stream channel, floodplains, and upland topography. Discharge measurements will be collected to aid in stream channel design. Soil sampling will assess the geo-chemistry of the upper watershed, and determine the soil's potential for revegetation efforts. Surveys, both cross-sectional and topographical, will be conducted to supplement site data on the NPS topographic maps. This information will be used to locate and estimate material amounts for use in recontouring the site and reconstructing the stream channel and floodplain.

Cost estimates for this project are approximately $15,000 per acre, based on an unpublished report, "Cost Estimation for Reclamation, National Park Service, Alaska Regional Office, January 1994." This report reviewed three separate mining reclamation projects that were conducted on abandoned claims in Denali National Park and Preserve.

Stream channel and floodplain restoration will be based on the techniques of the Glen Creek restoration project at Denali. Project design requirements will include a channel capacity for a 1.5-year (bankfull) discharge and a floodplain capacity for up to a 100-year discharge. The project design will include the use of bio-revetment, located on meanders, to encourage channel stabilization using natural methods. Brush bars, located in areas of little or no fines, will be employed to dissipate floodwater energy and encourage sediment deposition. Riparian areas will be revegetated with willow cuttings and other appropriate vegetation. Depending on the results from the soils nutrient analysis, fertilizer will be used to ensure a quick start for new vegetation. Monitoring of the stream channel and riparian areas will occur to determine the success of the reclamation efforts. Vegetation plots and permanently mounted cross-sections will be surveyed and measured again after the first year. Additional seeding and revegetation will occur on areas not vegetated during the first year.

ALTERNATIVES CONSIDERED

Alternative 1, the preferred alternative, would construct a visitor center complex near the former hotel site and reroute the Denali Park Road around the visitor center facilities and depot, thereby solving traffic pedestrian concerns. The Denali Science and Learning Center (DSLC) would be sited near these other facilities, but at a location where a quieter campus could be developed. Alternative 1 would impact about 1.1 acres of wetlands.

Alternative 2 describes the existing approved plans for the entrance area of Denali National Park and Preserve. This alternative considers completing approved actions under existing plans (the VTS EA, Frontcountry DCP/EIS, and Railroad Depot EA), which include expanded facilities, parking and improved circulation at the depot, expanded bus parking and concession facilities near the former hotel site, and the Denali Science and Learning Center (DSLC) housed in some of the buildings of the former McKinley Park Hotel. It also includes an expanded VAC for use as a visitor center and constructing a visitor services building complex with a 3-6 acre parking lot near the VAC. The expansion of the depot facilities with realignment of the Denali Park Road between it and the DSLC would solve many traffic/pedestrian safety concerns at the depot but not for the users of both facilities. Also, siting the visitor center near the VAC would not help attract package tour users of the depot to the visitor center. The parking expansion for the enlarged visitor center near the VAC and the depot expansion and road realignment would adversely impact 1.1 acres of wetlands.

Alternative 3 describes the existing conditions (No Action) in the entrance area. The park hotel closed at the end of 2001, so there remain no lodging or dining facilities in that area. Some former dilapidated hotel buildings remain. No visitor center would be constructed and no extended science and learning center would be established. No additional parking or areas for vehicle circulation would be constructed at the depot.

Several alternatives were discussed during the analysis process, but were eliminated from further evaluations. Restoring the McKinley Park airstrip was ruled out from further analysis. The park airstrip serves as an important base for emergency medical landings and private planes. It will remain open for NPS and general aviation use at existing levels until a suitable alternative is identified.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES ASSOCIATED WITH THE PROPOSED ACTION

The potential environmental consequences of the proposed action and alternative are fully described in the EA.

The realignment of a segment of the park road and expansion of the visitor services in the entrance area to include a visitor center complex, the DSLC, and railroad depot and parking expansion would cause about 13.0 acres of ground disturbance. This includes the loss of 1.1 acres of wetlands, and the loss of taiga communities, including white spruce and spruce hybrids, balsam poplar trees, and various shrubs including willow, alder, blueberry and Labrador tea. Area topography would be altered from the grading, cutting, and filling required to construct the visitor center complex, DSLC, depot facilities, new paths and utility corridors and the road realignment. Impacts to large mammal movements around the former McKinley Park Hotel and

Alaska Railroad Depot area already exist due to pedestrian and vehicular traffic, and concentrated visitor use. Further expansion of visitor facilities in that area is unlikely to create additional impacts to large mammal movements. Wildlife, including small mammals, birds, and moose, would be temporarily displaced from their habitat during construction, and permanently displaced from 13.0 acres of habitat due to the depot expansion and road realignment. No significant cumulative impacts on wildlife habitat or wildlife behavior would be anticipated from adding the proposed action to other regional activities due to the relatively large acreage of similar habitat nearby. Dust would be generated from the construction activities, creating a minor, short-term impact to air quality.

There is one recorded cultural site located within or nearby the project area. It is probable that a small cultural site classified as a pit and can burn (SI91-1) would be destroyed during parking lot sitework. Appropriate steps would be taken according to section 106 of the National Historic Preservation Act, as outlined in 36 CFR 800, in consultation with the Alaska State Historic Preservation Officer, and any other interested parties. Site documentation would be completed before construction at the site. If previously unrecorded or unknown sites are found during construction, work would be halted and a cultural resource specialist would be consulted.

Noise from the construction would create short-term, temporary disturbances to wildlife and area visitors. Construction activities would cause delays to pedestrian and vehicular traffic in the depot and hotel areas. In the long-term, the construction of a visitor center in conjunction with expansion of the railroad depot would have a positive impact on the visitor opportunities and park management. Construction of a DSLC would provide an opportunity for in-depth programs about park resource values. The park entrance area would have improved visitor facilities, improved and safer vehicular and pedestrian access, and the interpretive facilities would be more likely to attract at least 90 % of the visitors to the visitor center. Travel to the park by railway and highway is expected to increase with these improvements, and may translate into an overall increase in tourist dollars to the local business communities.

CONCLUSION

The NPS concludes that alternative 1, the preferred alternative, to construct a visitor center in conjunction with an expanded depot and creating a campus for an extended learning program, would meet management objectives to improve visitor services in the entrance area of Denali National Park and Preserve. The park road would be re-routed around the visitor center. Alternative 2, implement existing approved plans for the entrance area, would not fully meet the NPS objectives to contact the majority of park visitors entering the park and provide opportunities for in-depth interpretation and exploration of park values. Alternative 3, existing conditions, fails to achieve any progress toward improvement of visitor services, correction of safety concerns at the depot, or establishment of an in-park science center. The project will be designed to avoid as much wetland area as possible.

As required by NPS wetland protection procedures, impacts on the 1.1 acres of palustrine wetlands will be compensated for, on a minimum 1-for-1 acreage basis, by restoring riverine and palustrine wetland habitat and associated riparian habitat, in the Kantishna Hills region of the park (formerly placer-mined stream and riparian habitat). The NPS therefore finds the proposal to be consistent with Executive Order 11990 and the NPS no-net-loss wetlands policy.

Figure 7. Wetlands Compensation Area